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LYSANDER

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LYSANDER

A MIRACLE OF FLAPPERY AND SLATTERY

The Westland Lysander is one of Britain's, if not the world's, most easily identifiable aircraft and during its heyday the plane spotter's mantra was simply divided into two categories: 'aircraft and Lysanders'.

Originally designed for army co-operation duties, the Lysander was actually a failure in this role through no fault of the aircraft or its outstanding design which met the original specification A.39/34. Instead, the blame lay with senior Air Staff who were so focussed on the strategic concepts of air warfare they completely overlooked the importance of aerial liaison and support with ground forces; as a result only four army co-operation squadrons were sent to France with the BEF in 1939. Compare this to 1918 when the RAF was formed; the tasking allotted to the RFC was embraced and at least 20 squadrons undertook army co-operation – ironically over the very same terrain, although the second Great War would obviously not be as static as the first. Another analogy with the First World War was that the Lysander was poorly armed, when it needed to defend itself, in comparison to the biplanes over the trenches which enjoyed the same calibre weapons, generally had more of them and compared to the enclosed cockpits of the 'Lizzie' had a better field of fire.

The Lysander's career as an army co-operation aircraft was short, but it would be in other roles the type was destined to make a real name for itself. A Lysander would have been a welcome sight to a downed pilot in the sea during the early stages of the Second World War and, in much the same way, an agent seeking to return to England in the middle of night, likewise, would have embraced the 'Lizzie'. The Lysander was also heavily used at air gunnery schools and a multitude of target towing flights gave fledgling fighter pilots their first taste of firing live rounds at a moving target.

The Lysander was one of the world's first Short Take-off and Landing (STOL) aircraft thanks to the wonder of flaps and slats designed into a wing of unique design. Harald Penrose took great pleasure in demonstrating the Lysander's flying ability to the general public during pre-war air shows.

The Lysander never ceases to amaze me whenever I am lucky enough to see one; its sheer size alone defies its flying qualities and its ungainly appearance belies the aircraft's true versatility. The Lysander is, and will always be, one of the world's great iconic flying machines.

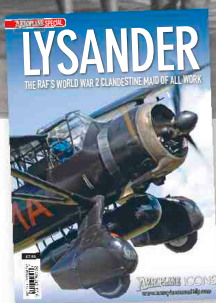
Martyn Chorlton September 2013

Lined up at Baldonnell not long after they were delivered are all six of the Irish Air Corps (IAC) Westland Lysander Mk IIs. The last IAC example was retired in April 1947. *Via Martyn Chorlton*

All images are from the Author's collection unless otherwise specified

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◀ Representing the Lysander Mk IIIA, V9367 'MA-B' of 161 Squadron that was flown by Plt Off Peter Vaughan-Fowler, DSO, DFC*, AFC out of Tempsford, the Shuttleworth Collection's excellent 'Lizzie' is one of the most popular airshow performers. *Darren Harbar Photography (www.darrenharbar.co.uk)*

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The first prototype Westland
Lysander, K6127, pictured in
August 1938. Via Martyn Chorlton

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REPLACING THE AUDAX



The Lysander was born from a mid-1930s requirement for a new Army Co-operation aircraft to replace the ageing Hawker Audax. This unique aircraft was destined to serve the RAF from 1938 to late 1945 in a host of roles and a variety of theatres. Martyn Chorlton introduces the early years of the 'Lizzie'.

Advancing Army Co-operation

A contemporary of the Hurricane and Spitfire fighters and the Blenheim and Whitley bombers, the Westland Lysander was the RAF's first monoplane army co-operation aircraft. It was one of many new aircraft that were brought into service as part of the RAF Expansion Scheme which was prompted by the rise and increasing threat of Germany's

Third Reich. The Lysander's eventual selection followed submissions by three other aircraft manufacturers, Hawker, Bristol and Avro (not pursued beyond preliminary drawings) to Specification A.39/34 (issued in April 1935) for a two-seat army co-operation aircraft.

Hawker was the first to present its ideas for A.39/34 and it was clearly in the strongest position of all the manufacturers thanks to

its own Hawker Audax which was the existing army co-operation aircraft of choice. Ironically, the Audax was produced under contract by a number of manufacturers, including Yeovil-based Westland. Even though the Hawker design was not accepted by the Air Ministry, Westland still benefitted as an order was placed for the Napier Dagger-powered Hector and its entire production of 179 aircraft was sub-contracted to the Yeovil-based manufacturer.

The only other remotely serious contender for A.39/34 was Bristol with its Type 148 of which two prototypes were ordered, K6551 and K6552, the first not flying until October 15, 1937 (16 months after the Lysander). Powered by a Bristol Mercury IX engine, the Type 148 had an impressive speed range of 62 - 225mph which was ideal



Developed from the highly successful Hawker Hart light bomber, the Audax was specifically designed for the Army Co-operation role. First flown in 1931 more than 700 were built, 625 of them serving the RAF alone between 1932 and 1937.



Designed to the same A.39/34 specification as the Lysander to replace the Audax and Hector, the Bristol Type 148 did not undertake its maiden flight until 16 months after the 'Lizzie'.

for co-operation work, but neither figure reached those written in the specification. One of the many requirements for such an aircraft was the ability to loiter and/or fly very slowly to pick-up messages and then deliver them at speed. All seemed to be going well for Bristol until it came to the specification's configuration demands. The Type 148 was a low-wing design and, as the aircraft would have to be capable of landing on very rough airfields or temporary strips, a wingtip may become fouled and damaged because of the uneven surface. More importantly, the 275 sq ft wing obstructed a large amount of the ground which is what the crew were supposed to be observing! It was obvious from a very early stage that there was going to be only one serious contender in this competition.

The Westland P.8

Westland had been doing its homework regarding exactly what the role of army co-operation involved before the company submitted its proposal for A.39/34. To help achieve this it obtained permission from the Air Ministry to view how the role of army co-operation was conducted in the field. Within days the entire Westland design team found themselves at No.1 School of Army Co-operation at Old Sarum near Salisbury, which had been training both army and RAF personnel in Wiltshire since 1920. The school was tasked with training, on average, 20 officers at a time on a twelve week course. The itinerary included tutorials on a host of subjects including artillery reconnaissance, photography, signalling and general military

organisation. Originally, and certainly towards the tail end of the First World War, much of this tasking was carried out by the observer but, by the mid-to-late 1930s, this had been transferred to the pilot. The observer was now responsible for the defence of the aircraft and this was an important factor which influenced how the team would design the cockpit.

The ability to fly at a very slow speed and still maintain full control was also in the forefront of the designer's mind. The autogyro was under serious consideration for army co-operation duties at the time and Westland knew that it would have to incorporate the ability to achieve a STOL (short take-off and landing) capability. By early 1935 the project, under the Westland designation of P.8, was born.



The Westland A.39/34 (P.8) K6127, fitted with a two-blade, fixed-pitch Watts propeller which was only used for taxiing trials. The aircraft is shown before the final aluminium doping was applied and the undercarriage spatted. *Via author*

Ingenuity and potential

In 1935 there was a shake up amongst the hierarchy of Westland Aircraft, which saw of one the founding members of the company, Sir Ernest Petter, hand the job of Technical Director to his son, William Edward Willoughby 'Teddy' Petter. Petter joined the company in 1929 as a graduate apprentice and his rapid rise to Technical Director was not received well by many of the senior management and as a result several left for pastures new.

Under 'Teddy' Petter was Chief Designer Arthur Davenport who first joined Petters Ltd, an engineering company also based in Yeovil, in 1912. When Westland was founded in 1915 Davenport transferred to the new aircraft division, where he had remained ever since. Westland's forward thinking design approach also included input from the company's Chief Test Pilot, Harald Penrose, who would be ultimately responsible for the P.8's early flight testing. By mid-1935, an order for two P.8 prototypes was placed and allocated the RAF serials K6127 and K6128, both to be powered by a Bristol Mercury engine.

By early June 1936 the first aircraft, K6127, was complete. On June 10, Harald Penrose began taxiing trials at Yeovil and five days later the aircraft took to the air for the first time.

Hard-working prototypes

Following successful manufacturer's trials, K6127 was delivered to the A&AEE (Aeroplane & Armament Experimental

Harald Penrose demonstrates the short-field ability of the prototype Lysander K6127. *Via author*



Establishment), Martlesham Heath on November 26, 1936 for performance and handling trials. Once these were complete the aircraft was passed on to the RAE (Royal Aircraft Establishment) at Farnborough, before appearing in front of the general public for the first time at Hendon on June 27, displaying New Types No.6 on the fuselage.

After further comings and goings between Farnborough and Yeovil, K6127 was

fitted with a Mercury XII engine and, by June 1938, was back at the RAE for aerodynamic testing. Further performance trials were conducted at the A&AEE before the busy aircraft returned to Yeovil for almost two years. K6127 was brought out of its semi-retirement for 20mm gun trials at the A&AEE in July 1940 and during August and September found itself on operational strength for the first and only time with 110 Squadron, RCAF. By late 1940, the aircraft was



From its maiden flight on June 15, 1936 right up until its withdrawal from use in early 1943 the prototype Lysander, K6127, was a hard working machine. Modified and restored to its original configuration on numerous occasions the aircraft was not SOC from 9 MU at Cosford until June 1944. *Via author*

back at Yeovil in preparation for a unique and extensive modification.

The Westland design team came up with a proposal for an aircraft for anti-invasion operations, specifically for strafing enemy ground forces. The solution was to fit a Boulton Paul four-gun turret into the end of the fuselage in the position once occupied by the tail and replace the flying surfaces with a large span tailplane with twin fins and rudders at its extremities. The tailplane was so large it was effectively a second wing, a Delanne type, which increased the total wing area from 260 to 392 sq ft. The fuselage was shortened by 4ft 9in but, despite the dramatic change in appearance from the

original P.8, Penrose stated that the aircraft handled very well and tests at the A&AEE in October 1941 endorsed this. This aircraft has been retrospectively referred to by many names; the most accurate and most likely to have been adopted by Westland was the P.12 Wendover.

Returned to its original configuration K6127 was modified again in 1942 for trials with castoring wheels and caterpillar tracks; both in an effort to improve the type's short strip and rough ground capability. By January 1943 the aircraft was placed in storage with 9 MU at Cosford and remained there until it was SOC on June 13, 1944.

The second prototype, K6128, first flew

on December 11, 1936. The aircraft was delivered to the A&AEE, for the first time, on April 1, 1937 returning a few days later to Yeovil for fitment of a Mercury XII engine. Further performance, sound-proofing and tropical trials continued with the A&AEE through to early 1938 when it was despatched to Aboukir for 'in theatre' tropical trials with 31 Squadron. By May 1939 the aircraft began a tour of RAF units for service trials, including 20, 5 and 28 Squadrons before being downgraded as a ground instructional airframe on July 8, 1940. Its fate beyond this date is unknown, but it would have done well to have survived as long as its predecessor.



First flown on December 11, 1936 the second prototype Lysander, K6128, did not enjoy the long and varied career of its predecessor. *Via author*



The second production Lysander Mk I, L4674, built by Westland at Yeovil under contract 555425/36. The aircraft is being taxied by a hatted Harald Penrose, very close to an appreciative audience. *Via author*



Andy Hay/www.flyingart.co.uk

Orders off the board

The Westland P.8 had clearly impressed the Air Ministry to such an extent that the first production run for 66 Mercury XII-powered aircraft (L4673 to L4738), under Contract No. 555425/36 was placed before the prototype had actually flown. A further order for another 78 Perseus XII-powered machines (L4739 to L4816) under the same contract was also placed before the second prototype had flown in December 1936.

It was only once the first production order was placed that the aircraft was officially named the Lysander, following a long tradition of naming army co-operation (AC) machines with classical names. Lysander was the son of a Spartan Admiral, Aristocritus, who was one of the most powerful men in Greece in approximately 400 BC.

The first production Westland Lysander Mk I, L4673, left the Yeovil production line on May 15, 1938 before being passed on to the A&AEE for type testing. The second machine, L4674, was retained by Westland for tests with a Perseus XII engine, which would ultimately be installed in the Lysander Mk II for the

second production order. L4675 was fitted with dual controls for the CFS (Central Flying School) at Upavon after a misunderstanding - the school actually required a standard production aircraft for the writing of handling notes; L4676 was supplied instead. Therefore, L4675 became the first Lysander to enter squadron service.

Into service

It was 4 Squadron at Odiham that was earmarked to be the first recipient of the Lysander; however, the unit was committed to taking part in a large mobilisation exercise and would have to fly its Hectors a few months longer. 16 Squadron, under the command of Sqn Ldr T Humble at Old Sarum, a unit that had been flying the Audax since December 1933 was chosen instead, receiving its first aircraft from late May 1938 with the bulk of them being on strength during June. 16 Squadron was an obvious second choice because the School of Army Co-operation was also based at Old Sarum and 16 Squadron's pilots were regularly seconded to provide instruction for the students of the school.

Of the first batch of production Lysanders, 14 were issued to 16 Squadron and a further nine were allocated to the School of Army Co-operation. 2 (AC) Squadron followed in July 1938 at Hawkinge under the command of Sqn Ldr A J W Geddes who, like the majority of Army Co-operation commanding officers, was seconded to the RAF from the Royal Artillery where he had served as a captain. 4 Squadron, under the command of Sqn Ldr G P Charles, was next in December and then 13 (AC) Squadron also at Odiham, under the command of Sqn Ldr S C H Gray, gave up its Hectors in favour of the Lysander from January 23, 1939. Lysanders were also issued to 26 Squadron at Catterick in place of their old Hectors in February 1939 and the final unit in Britain to receive the type before the outbreak of the Second World War was 614 (County of Glamorgan) Squadron in July at Pengam Moors. The one exception to the home-based units was 208 (AC) Squadron at Heliopolis, Egypt, which began to receive the Lysander Mk I and Mk II from January 1939. ♦

16 Squadron, the first RAF unit to receive the Lysander show off three of their aircraft during a press photo call in 1939. The unit operated the type from May 1938 through to July 1942. *Aeroplane*



K6127 displays Experimental Park
number '6' prior to its public
appearance at Hendon in 1936.
Via Martyn Chorlton







FIRST IN SERVICE

4 Squadron was the first of over 40 operational RAF squadrons to receive the Lysander. Martyn Chorlton tells the unit's 'Lizzie' story from its arrival in October 1938 to the end of the disastrous Battle of France

Return to France

4 Squadron was no stranger to operating in France, having served there from August 1914 to the end of 1918 in the previous world conflict. During the Second World War, although very few of this new generation of officers and airmen would realise, they returned to the same skies to fight a completely different kind of war.

Under the control of 50 (Army Co-operation) Wing, which was part of the Air

Component of the BEF, the squadron left their Odiham home, arriving at Mons-en-Chaussée via Southampton and Cherbourg on September 24, 1939. The squadron's Westland Lysander Mk IIs, which it had been operating since December 1938, arrived later in the day to find a chaotic and cramped airfield. Located 20 miles east of Amiens, Mons-en-Chaussée was the temporary home of virtually all of the Air Component and 4 Squadron's personnel found themselves

scattered in a variety of buildings in the local village, initially without blankets or rations because their supporting vehicles had become lost after leaving Cherbourg.

Under the temporary command of Sqn Ldr P L Donkin, and later Sqn Ldr Maffett, 4 Squadron wasted no time in flying as many familiarisation sorties as possible. Their operational area was up to and along the Belgian border down to the Maginot Line and every opportunity was also taken to photograph as much of the landscape as possible. It was not long before the local area became very familiar, but this did not stop the occasional accidental foray into Belgian airspace which would always result in a few rounds of flak to remind the aircrew where they were.

On October 3, 1939 operations became



Lysander Mk II, L4742, during a pre-war Army Co-operation exercise using its long message pick-up hook. The aircraft was lost on May 14, 1940 when it was presumed to have been shot down by Oblt Kupka in a Bf109 of 9/JG3. The 'Lizzie' was brought down over Gembloux and its crew, Fg Off Terence C Clarke and AC 1 William S Rodulson, were killed. *Flight via Aeroplane*

easier with a short move to Monchy-Lagache, ten miles west of Saint-Quentin. A false sense of security now descended upon the squadron, bolstered by sight-seeing trips to the Maginot Line which gave the impression of being impregnable. The 'Phoney War' was now in full swing and the only enemy seemed to be boredom which was staved off by regular parades and kit inspections. One consolation was an increase in sports afternoons.

The squadron had twelve Lysanders on strength at this time, divided into two flights. To vary and increase the operational coverage of the unit, a permanent detachment was established at Ronchin on the outskirts of Lille, less than ten miles from the Belgian border. Each flight took turns in operating from Ronchin on a weekly basis. This was a popular duty thanks to the high standard of the local bar which would



All smiles in this pre-war group photo of pilots (both RAF and Army) of 4 Squadron at RAF Odiham in early 1939. *4 Squadron records*

provide transport by tram back to their accommodation.

Operations by the squadron during the winter were almost non-existent with both Monchy and Ronchin being reduced to a quagmire. Unbeknown to the BEF, it was this same weather that curtailed Hitler's offensive into France.

The 'Phoney War' comes to an end

Now under the command of newly promoted Wg Cdr G P Charles OBE, 4 Squadron was expanded to 18 aircraft from March 1940 enabling the formation of 'C' Flight. All Lysander squadrons in France at the time were also increased in strength, making a total of 90 aircraft available. The average serviceability was a healthy 82% which meant that at least 74 Lysanders were on hand for daily operations in support of the BEF. With a larger number of aircraft, 4 Squadron operations continued through the spring with almost daily sorties to local ranges to hone their bombing and air to ground strafing skills. However, the 'phoney' war was approaching its conclusion and 'rumour control' was rife with news of the advancing Germans.

The realisation that the party in France was over came on May 10, 1940 when the Germans began their attack along the Dutch and Belgian borders, sweeping their weak armies aside and pushing on towards France. The attack started early for 4 Squadron with a He111 spotted at 0403hrs flying low over the village of Monchy-Lagache without dropping a bomb. The squadron was immediately mobilised with 'B' Flight moving to a satellite airfield at Crox Molineux while 'A' Flight and a large proportion of ground personnel moved to Ronchin. In the afternoon, at least half a dozen He111s flew over Monchy-Lagache, one of them was losing height. They were greeted with intense anti-aircraft fire from Royal Artillery 210 Battery which claimed one shot down in flames and a

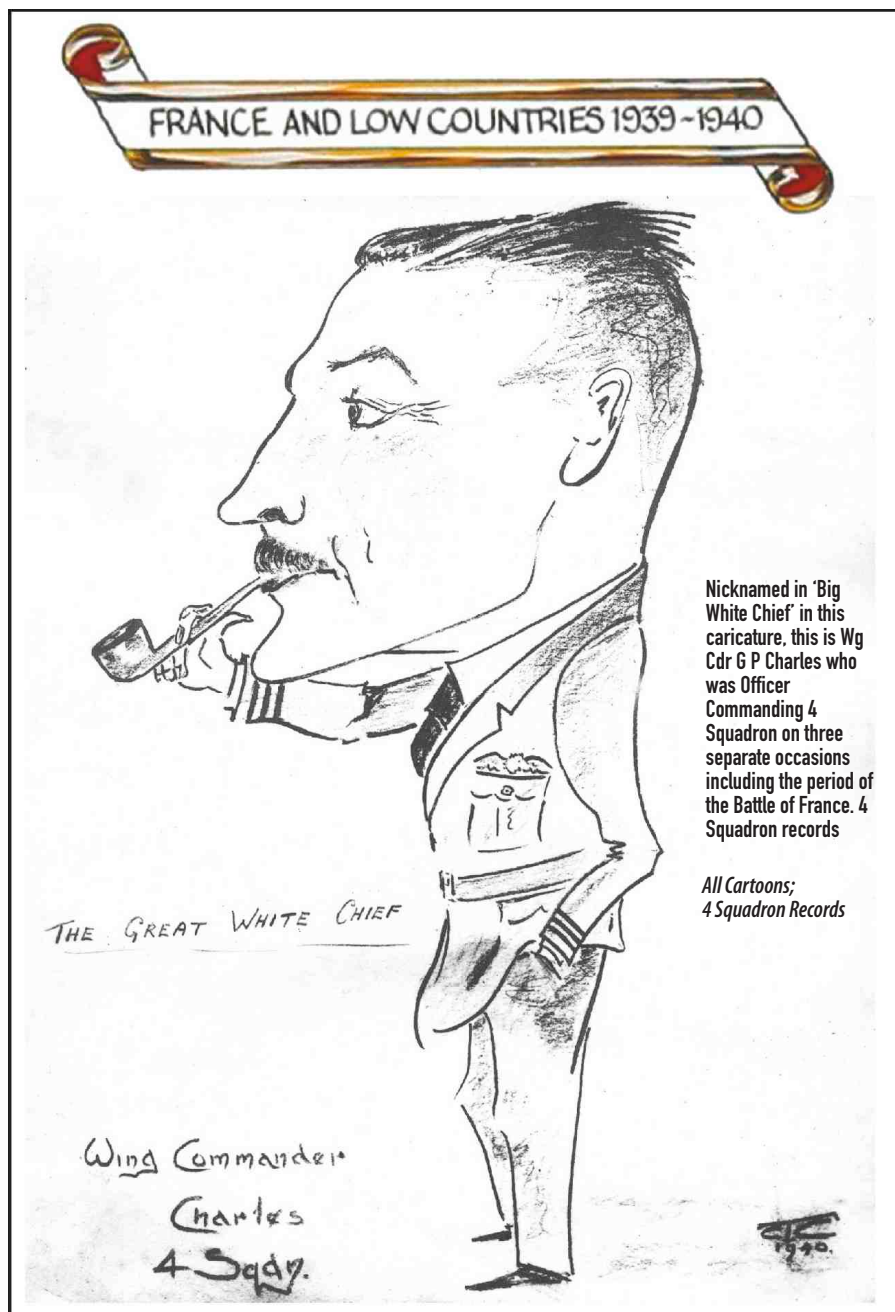
second having to make a forced landing.

Only months earlier, flying over Belgium was strictly prohibited but now its forces were desperately fighting a superior German force and the BEF, along with 4 Squadron, pushed forward towards them. Several sorties were flown on May 10, 4 Squadron was tasked with reconnaissance, photographic and contact patrols over positions that were at least four hours ahead of the Allied ground troops.



4 Squadron Commanding Officers, Oct 1938 to April 1942

Sqn Ldr G P Charles	Aug 6, 1939
Sqn Ldr P L Donkin	Sep 7, 1940
Wg Cdr G P Charles	Sep 11, 1940
Sqn Ldr Maffett	Oct 29, 1940
Wg Cdr P H R Saunders	Dec 9, 1940
Wg Cdr G P Charles	Feb 12, 1941
Wg Cdr P H R Saunders	Jun 1, 1941



To operate even more effectively, 4 Squadron needed an ALG (Advanced Landing Ground) deep in Belgium. After quickly surveying several known landing grounds Wg Cdr Charles opted for a new site located at Aspelaere, ten miles west of Brussels. It would require some work to prepare it and a company of Royal Engineers was sent to the site which it was hoped would be ready in just a few days. In the meantime, operations continued from Ronchin although the aircraft returned to Monchy-Lagache in the evening, reducing the chances of losing a batch of Lysanders in a single enemy raid.

By May 13, 2 Corps was dug in along the River Dyle and 4 Squadron were above reporting on enemy troop positions. First contact with the enemy was achieved by Plt Off B Malins and LAC 'Ginger' Drew, who were lucky to make it back to Ronchin after receiving some unwanted attention from several German anti-aircraft guns. The Luftwaffe was also operating in numbers and at least one 4 Squadron Lysander was

attacked by no less than nine Bf109s but managed to escape, albeit with 32 holes for the experience. As the Lysanders encountered ever increasing numbers of enemy fighters, it was only a matter of time before the first casualty was recorded. Fg Off P W Vaughan and his Air Gunner AC E Mold in P9063 failed to return from a tactical reconnaissance after leaving Monchy-Lagache at 0730hrs. After flying over enemy positions on the banks of the Gete river, the Lysander was shot down by a Bf109 flown by Lt H Braxator of 2./JG1 and crashed between Outgaarden and Goetsenhoven.

Advancing towards the enemy

'B' Flight was moved forward to the now-completed Aspelaere at midday on the 14th May. It was literally only fit for Lysander operations, taking nothing away from the excellent hard work of the sappers in getting it ready so quickly. Unfortunately, 4 Squadron's arrival did not go that smoothly

as another Lysander was needlessly written off while attempting to land – Plt Off Hankey and Sgt Lewis survived the accident but P1711 would never fly again. Two more Lysanders would also be lost before the day was out, this time to enemy fighters. Fg Off T C Clarke and AC W S Rodulson are believed to have fallen victim to the guns of Oblt Kupka's Bf109 of 9./JG3. Neither survived after their aircraft, L4742, crashed into the village of Campagne du Reck. The same fate befell Plt Off D M Barbour and Cpl R H Waters in Lysander II L4745, sadly they were never found. By the end of May 14, 4 Squadron were down to eleven serviceable aircraft and their loss rate was already unsustainable.

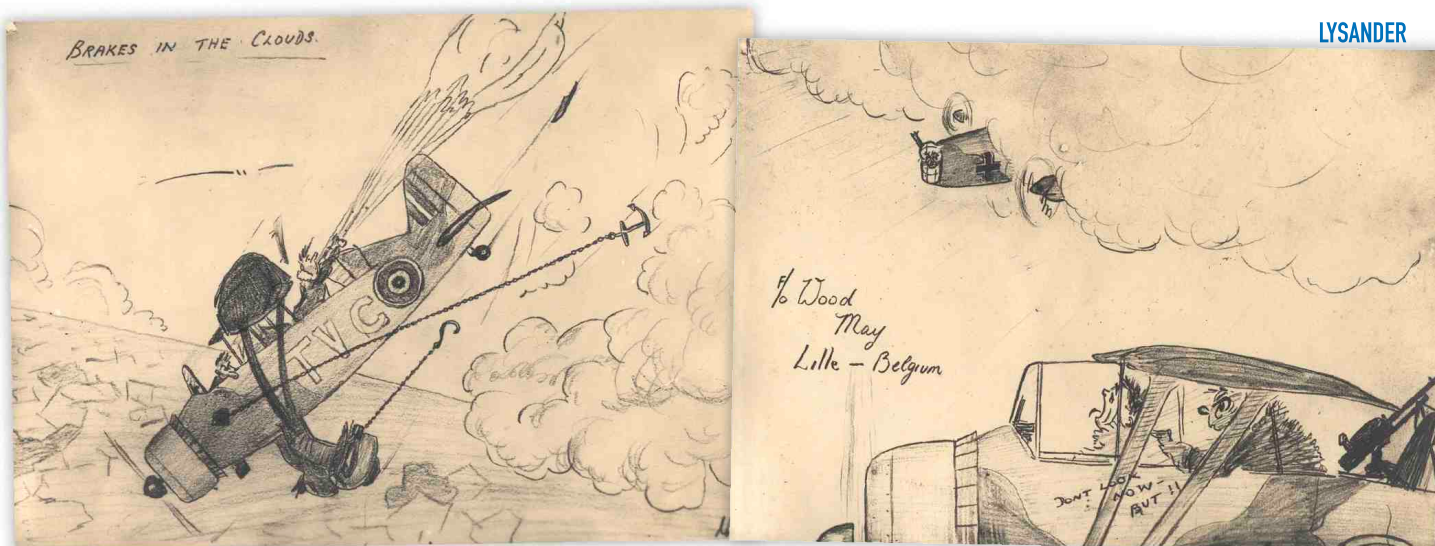
The following day, it was decided that the entire squadron would move forward to Ronchin while still maintaining detachments at Aspelaere and Clairmarais. By midday on May 16 the move was complete with 'B' Flight now operating from the ALG at Aspelaere. 'B' Flt now found itself covering the massed withdrawal of 2 Corp and it was another frantic day of action for 4 Squadron. Plt Off Langley and his Air Gunner, LAC J H Gillham, came under a sustained attack by six Bf110s while flying an observation sortie near Louvain. Despite the overwhelming odds, Gillham claimed to have shot down one of the twin-engined fighters before their Lysander, L4814, force-landed near Lille. Another aircraft, P9064, flown by Fg Off E E Wood and Air Gunner Cpl J Bower also failed to return from a tactical reconnaissance sortie. Wood was killed while Bower is believed to have survived.

Despite its anonymity, a Lysander was seen landing at Aspelaere on May 17 by a Luftwaffe spotter plane and by 1600hrs the ALG was under attack by several Ju87s, although luckily most of their bombs fell south of the small airfield. No significant damage was caused, but it was clear that there was no place for 4 Squadron to hide and by now the BEF was also on the back foot as the Germans had already broken through the French lines. The morale of the squadron was under great strain and this was only marginally lifted when five new Lysanders were collected from Glisy to help stem the tide of the squadron's losses.

It was clear that the ALG was under threat of being overrun by the enemy and in the early hours of May 18 only Wg Cdr Charles and a couple of officers remained, while the remnants of 'B' Flight returned to Ronchin. 'A' Flight was now dispersed to another site at Lille Marcq while 'C' Flight carried out the bulk of the day's operations. These included conducting reconnaissance along the River Dendre to monitor the advance of the enemy towards Brussels. It was on one of these sorties that Fg Off E C Ford and Fg Off K W Graham in N1263 came under attack by several Bf109s. The Lysander stood no chance, falling to the guns of Oblt Rempel and Uffz Wischniewski of 6./JG2, south east of Brussels. Neither of the airmen survived.

Needless losses

What seems like a great waste of both aircrew and aircraft occurred on May 19 when a pair of Lysanders of 'A' Flight were conducting



practice landings at Lille Marcq. It seems remarkable that in such a hostile environment a task like this would be undertaken resulting in four aircrew dead and two more aircraft destroyed. A large formation of Bf109s from both 2 and 3(J)/LG2 pounced on the unsuspecting Lysanders, quickly dispatching both into burning wrecks on the edge of the airfield.

The following day sorties continued, but with the enemy rapidly approaching orders were received for the ground personnel of 4 Squadron to leave Ronchin for Boulogne. The first echelon, under the command of Fg Off King, left Ronchin in nine lorries which on arrival at Merville were unloaded and sent back to Ronchin for the second echelon. Just as the first echelon was about to leave Merville it came under attack from ten He111s and the airmen were lucky to escape unscathed on this occasion. Despite the roads being jammed with refugees, King made it to Boulogne in good time, only to receive further orders to move to Clairmarais (Klaarmares) near St Omer. At 0300hrs on May 21, the first echelon arrived, to prepare for further operations from Clairmarais.

The Germans had now advanced to within artillery range of Ronchin and, by the end of May 21, it had been relegated to an ALG. 4 Squadron still managed to fly several tactical reconnaissance sorties during the day. Once again though this came at a cost and two more Lysanders were lost, the first at 0800hrs was from 'B' Flight at Ronchin. Plt Off P M Peace and Cpl R A Tamblin were shot down by a Bf109 of 3./JG77 crashing at Bruyelle, near Tournai; Lt Hohoff claimed the kill. The other loss of the day occurred after Plt Off T J F Davey and LAC J H Gillham were taking off from Clairmarais. Their Lysander Mk II, N1296, was brought down by a trio of Do215s which were about to attack St Omer. These would thankfully be the last aircrew fatalities but unfortunately worse was to come for those on the ground.

Dunkirk beckons

It was now time to get away from Ronchin and, at 0100hrs on May 22, a convoy of ground personnel were ordered to make for Dunkirk. En-route they were attacked at least six times by He111s and as the convoy got closer to Dunkirk, a large formation of Ju87s seemed to single out the 4 Squadron contingent. They carried out a deadly,

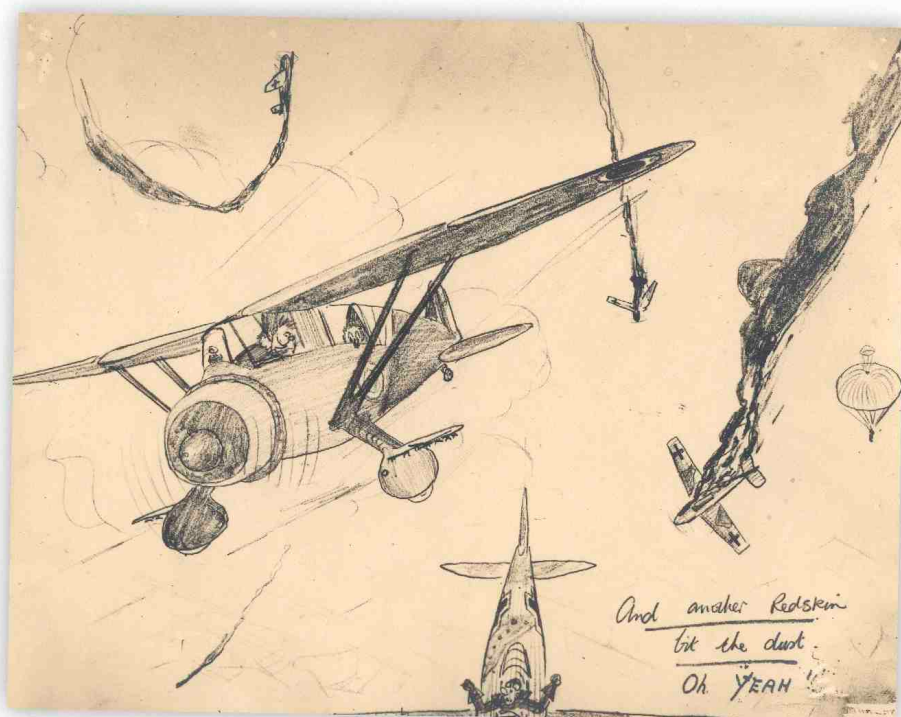
accurate attack killing many of the 4 Squadron personnel and destroying a large amount of equipment. Those who survived, now under the command of WO Wallace, buried their colleagues in a field beside the still-burning remains of their transport and continued on foot. By 0830hrs they finally arrived in Dunkirk to find a port that had been pounded by the Luftwaffe and the sky was almost black with the smoke from burning oil tanks. That evening, the survivors were taken aboard the SS St Helier and moved to the safety of Dover later that evening.

The surviving aircraft of 'B' and 'C' Flights, now under the command of Flt Lt Campbell-Voullaire, left Ronchin and headed for Clairmarais where they hoped they could continue the fight. The Lysanders took off at 0600hrs during a lull in the shelling, only to run into a formation of over 50 enemy aircraft, made up of Do17s, escorted by Bf109s and Bf110s. Scattering in all directions, the Lysanders were lucky to escape but this marked the end of the two flights' effectiveness in this campaign. The day ended with the 'A' Flight groundcrew and HQ section making it to Clairmarais with just

three serviceable aircraft remaining together with the remnants of 'A' Flight, 13 Squadron, which was now working with 4 Squadron having suffered similar losses.

Remarkable escape

One of the aircraft that escaped the melee near Ronchin was the Lysander of Plt Off G Scott and LAC 'Paddy' McAleese. They ended up making an unscheduled stop at an airfield near St Pol to be greeted by an Army major who told them that the airfield had been evacuated. The major seized the opportunity to make use of the Lysander for some German tank spotting which had been reported in the area. Without hesitation, Scott took off again to look for the enemy but failed to find them so returned to St Pol. As they approached the airfield, the Germans found them and the Lysander was riddled with machine gun fire. With the throttle wide open and now with a rough sounding engine, Scott managed to escape the enemy fire but, once clear, made a forced landing to have a closer look at the damage. At least 23 bullet holes were counted throughout the aircraft including a hole in one of the Bristol Perseus' nine cylinders.



4 Squadron lost 14 Lysanders during the Battle of France between early March and late June 1940. Eleven of these were lost between May 13 and May 21, 1940! *Via author*



Both airmen repaired the Lysander as best as they could, but with the light fading, the duo decided to stay the night with their battle-damaged aircraft. The following morning, they were hastily awakened by a Frenchman who told them that German tanks were less than a mile away and closing fast. Both airmen leapt aboard the Lysander and quickly prepared to take off but, much to the frustration of Scott, the aircraft's battery had drained overnight and the engine would not turn. Scott kept trying frantically to start the engine while McAleese prepared for imminent death or at best captivity. Miraculously, with the German tanks just a few hundred yards away the Perseus burst into life and, literally under the enemy's gaze, the Lysander clambered into the air. A few more holes were added but Scott and McAleese escaped again with very few options left other than to make for England. They found sanctuary at Ford in Sussex and, with only a small amount of fuel remaining, Scott taxied up to the airfield's watch office. The shabby, tired looking Lysander was refuelled and, after a few phone calls, Scott discovered that other 4 Squadron machines were congregating at Hawkinge. By now, Scott and McAleese were as tired as their aircraft but this did not stop an officious white-coated civilian demanding the crew pay 7s 6d in landing fees! Their reply was not recorded but I'm sure it wasn't a polite one! On arrival at Hawkinge, they found the airfield in chaos and the flying controller, despite what they had just been through, tried to persuade them to return across the Channel with a load of supplies for troops in Calais. Thankfully, official orders

were received for the remains of 4 Squadron to reorganise at Detling and by the May 24, 1940 the squadron, or what was left of it, was safely away from the fighting, at Ringway.

'B' Flight was still in France on May 24 with the intention of continuing reconnaissance sorties from Clairmarais. However, the situation was rapidly deteriorating and the airfield was about to be overrun by enemy tanks. By 0430hrs the airfield was evacuated with both the aircraft and groundcrew heading for Dunkirk while Wg Cdr Charles and Plt Off Falconer remained behind to destroy anything of potential use to the enemy, including 5,000 gallons of aviation fuel and the squadron's trusty DH.89. On arrival at Dunkirk, the 4 Squadron Lysanders crossed the Channel for Hawkinge. The groundcrew eventually managed to

escape onboard HMS Wild Swan and a few days later all were reunited at Ringway.

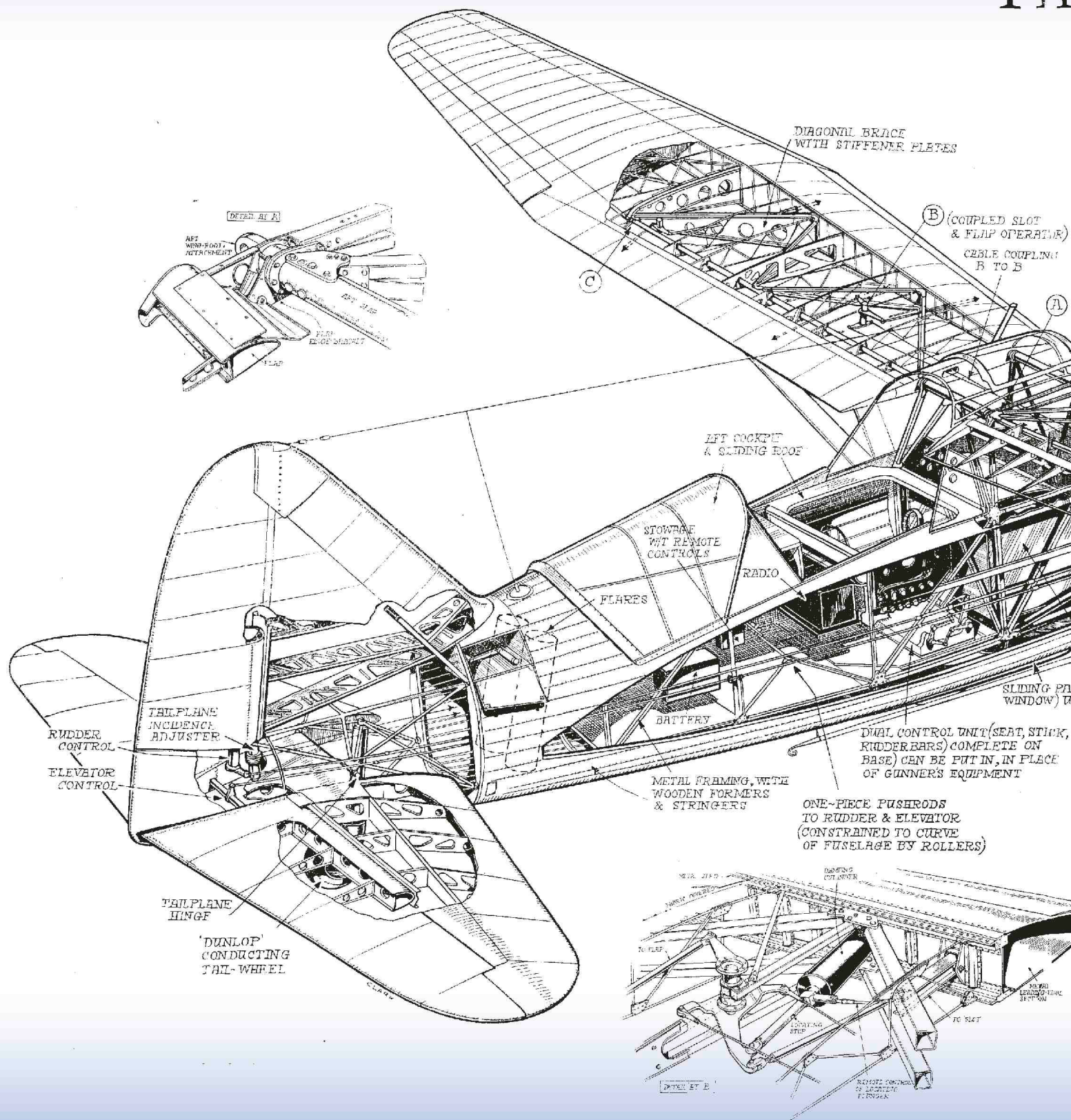
During those few days in May 1940, 4 Squadron had managed to fly 106 operational sorties with the loss of 18 aircrew and twelve Lysanders destroyed. It was the groundcrew who suffered most of all though, being under fire throughout the majority of the month and suffering terrible losses during the attempt to reach Dunkirk; casualties were recorded at approximately 60%! At least one other groundcrew died of his injuries in England and three more were recorded as missing before the evacuation of Dunkirk was completed on June 25, 1940. The squadron had definitely earned its battle honour while supporting the BEF during those desperate few days trying to slow the advance of the German military machine. ❖

4 SQUADRON LYSANDER LOSSES DURING THE BATTLE OF FRANCE

Mar 9, 1940	L6852	Crash landing at Lille-Rochin; Plt Off W B Adamson +, LAC Satchell (OK)
Apr 16, 1940	L4750	Crashed in t/o at Padville; Plt Off A F B Ramsey +, LAC J H Gillham (OK)
May 13, 1940	P9063	Shot down; Plt Off P W Vaughan & AC 2 E Mold +
May 14, 1940	P1711	Crashed nr Aspelaere ALG; Plt Off Hankey & Sgt Lewis (OK)
May 14, 1940	L4742	Shot down; Fg Off T C Clarke & AC 1 W S Rodulson +
May 14, 1940	L4745	Missing; Plt Off D M Barbour & Cpl R H Waters +
May 16, 1940	L4814	Force landed nr Louvain; Plt Off Langley & LAC J H Gillham (OK)
May 16, 1940	P9064	FTR/Missing; Fg Off E E Wood + & Cpl J Bower (OK)
May 18, 1940	N1263	Shot down; Fg Off E C Ford & Fg Off K W Graham +
May 19, 1940	?	Shot down; Plt Off J A Plumb & LAC R J Thornton +
May 19, 1940	N1305	Shot down; Fg Off L J Oldacres & LAC C Butterill +
May 21, 1940	N1296	Shot down; Plt Off T J F Davey & LAC J H Gillham +
May 21, 1940	N1298	Shot down; Plt Off P M Peace & Cpl R A Tamblin +
Jun 28, 1940	P1733	Crashed nr Wiggington; Plt Off A B Corbett & AG (OK)

A ground crewman fits an F.24 camera into a 4 Squadron Lysander only weeks before the beginning of the Battle of France. The peaceful 'Phoney War' period was brought to an abrupt end from mid-May 1940. *Topical Press Agency*

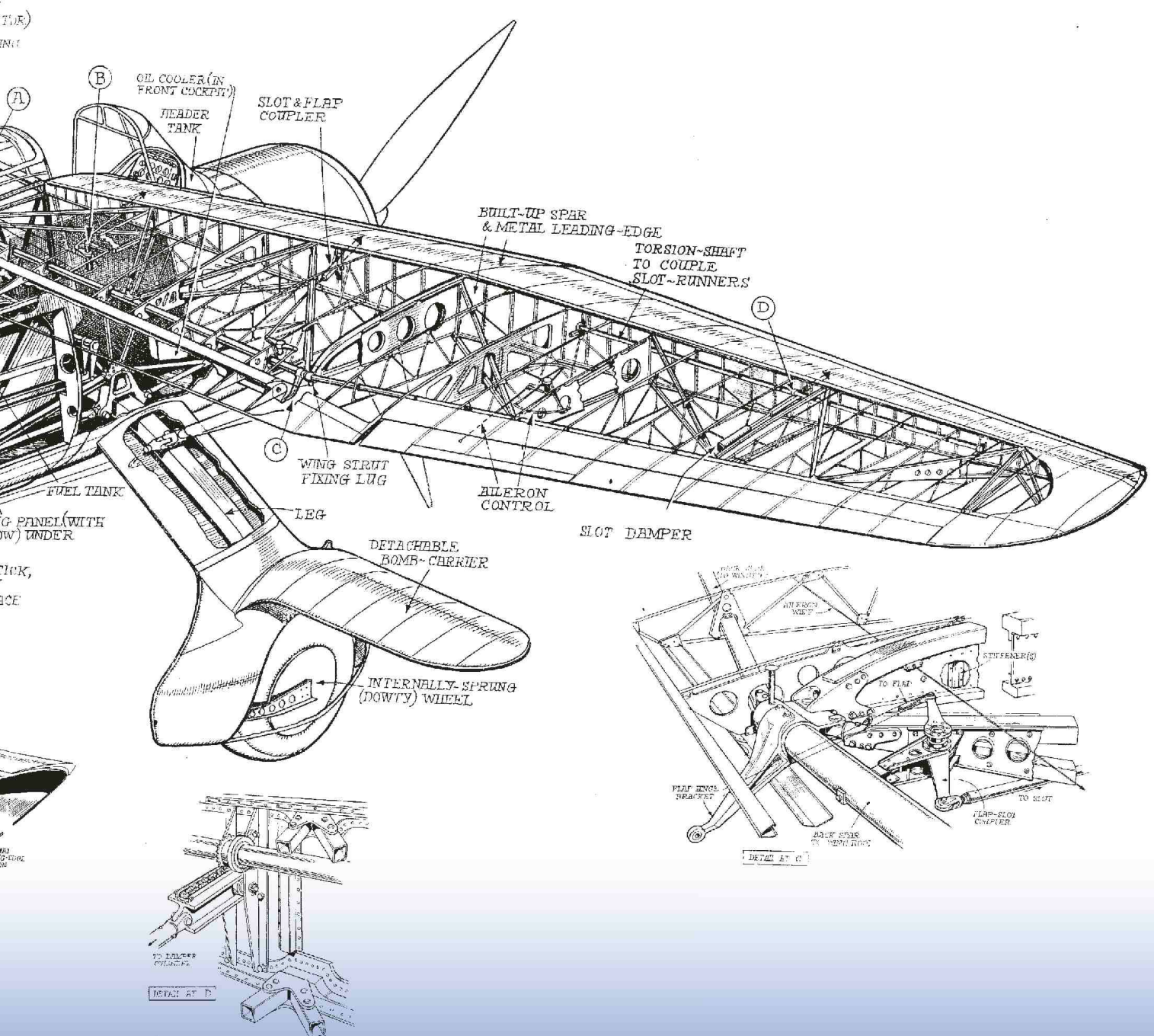




THE WESTLAND LYSANDER

ARMY CO-OPERATION MONOPLANE

(890 h.p. Bristol Mercury)



THE 'LIZZIE'S' BARE BONES

'Teddy' Petter's and Arthur Davenport's Westland P.8 was already being sketched out before Specification A.39/34 was issued and within the space of six months, the detailed design stages had been completed. Owen Cooper looks under the skin of the 'Lizzie'.

The unconventional, built conventionally

On paper, the description of this two-seat single-engine high-wing monoplane sounds quite unremarkable. Its construction incorporated traditional, established Westland methods of aircraft manufacturing. While on the surface the Lysander was a unique and complex looking machine, its appearance was of a purely practical aircraft which accomplished exactly what it was originally designed to do – army co-operation missions with the ability to take off and land in a very small area. Its robustness

would later lend itself to attacking land or maritime targets, ASR (Air-Sea Rescue) and the rigours of target towing.

Fuselage

The fuselage was built in two sections, fore and aft, which were joined together by bolted flat plates. The forward section, from the engine bulkhead to the rear cockpit, was made of square-sectioned duralumin tubes, joined together by gusset bolted plates or U-section extrusions. The rear section was constructed with welded steel tubes and the entire fuselage was assembled using

Westland's established and conventional boxed girder construction.

The fuselage shape of the Lysander was achieved using wooden formers and stringers which were all fabric covered. Along the starboard side of fuselage, running from the engine bulkhead to the rear cockpit, were generously sized panels which allowed access for general maintenance and inspection; this was always appreciated by the ground crews, especially in the field.

The crew were accommodated under a lengthy greenhouse type canopy which gave both airmen an excellent field of vision in all



The second prototype Westland P.8, K6128, in skeletal form at Yeovil in mid-1936.
All images in this chapter Owen Cooper

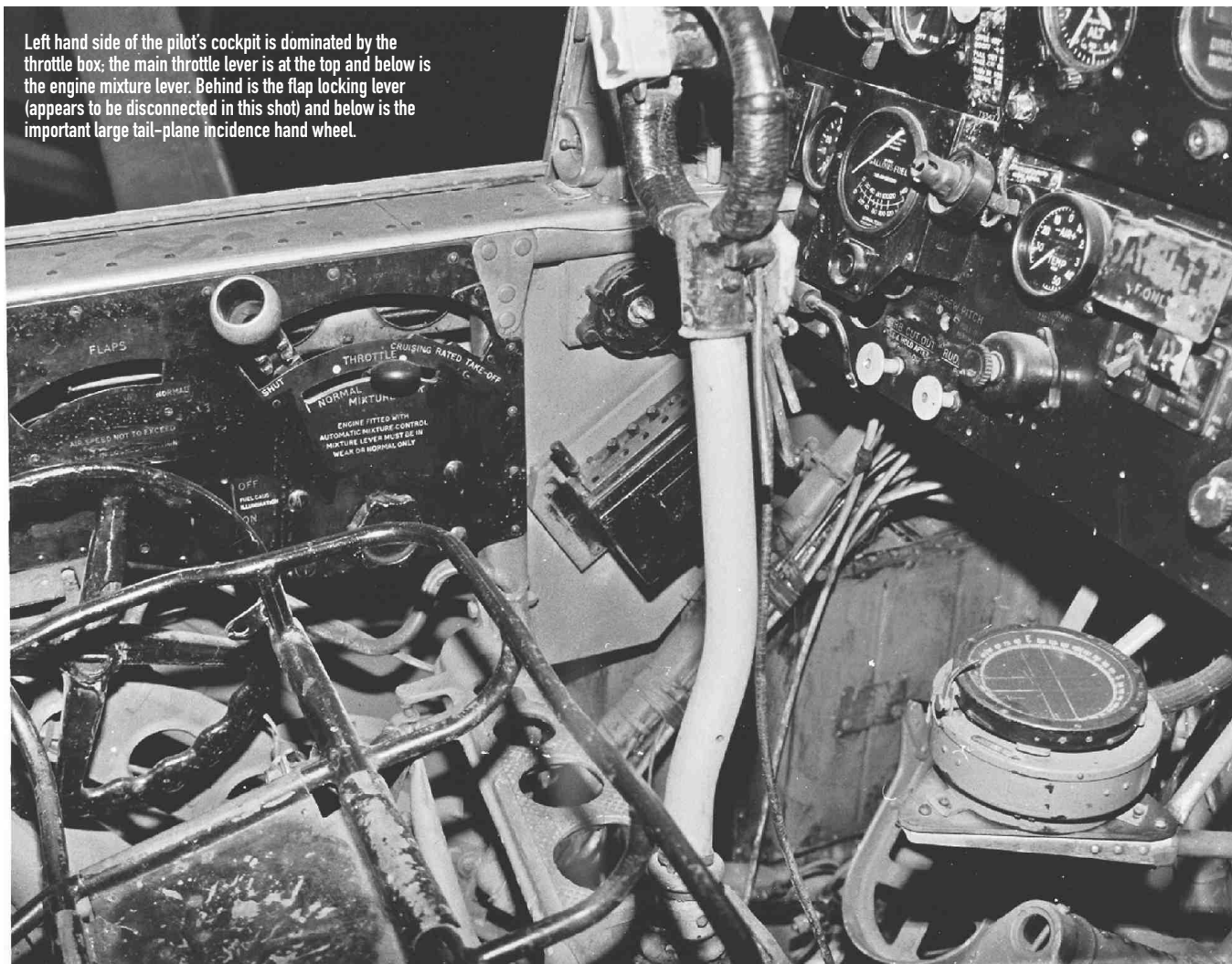


▲ Cockpit of the Westland Lysander dominated by the pilot's six vital instruments contained within the central panel. From top left to bottom right they are; the ASI (Air Speed Indicator); Artificial Horizon; Rate-of-climb Indicator; Altimeter; Direction Indicator and the Turn-and-bank Indicator.

► The right hand side of the Lysander's instrument panel contains engine pressure and boost gauges such as the fuel pressure gauge, boost gauge, RPM indicator, oil pressure gauge and oil temperature gauge. The switchbox visible on the extreme right contains the switches for the navigation lamps, gun heating and pitot-head heating.



Left hand side of the pilot's cockpit is dominated by the throttle box; the main throttle lever is at the top and below is the engine mixture lever. Behind is the flap locking lever (appears to be disconnected in this shot) and below is the important large tail-plane incidence hand wheel.



directions. The pilot's position forward of the wing was fitted with a rearward sliding roof and sliding side windows and was accessed via steps on the port undercarriage leg and enclosed in the fuselage. The canopy extended through to the observers position which was also fitted with a sliding window in the roof and was accessed using a pair of enclosed steps on the starboard side. The rear cockpit was fitted with hinged floor panels which gave access to a bomb sight, bomb switches, a tail drift sight and the message hook.

The pilot and observer were separated by a superstructure shaped like a pylon to which the wing spars were connected. The pilot was protected by an armour plated bulkhead behind his seat and a second armour plate behind the rear cockpit.

Wings

The Lysander's unique wing design gave the aircraft unrivalled low-speed performance and handling. It was fitted to the fuselage via pin-joints attached to a Cabane strut within the fuselage structure. Inboard, the wing had a reversed, tapered leading edge and a straight trailing edge. The outboard section was the opposite. The 'D' sectioned main spar was made from Hiduminium with extruded sections machined into flanges, all joined by a flat plate which was stiffened with riveted sections. Attached to the riveted sections were the leading ribs which

were then covered in sheet metal to create a 'D' section leading edge torsion box. The main ribs were made of light alloy and were fabric-covered. At the rear of the main spar was a triangulated drag bracing made up of square section light alloy and tubes made of steel. These tubes were attached to a light or 'false' rear spar to which the flaps and ailerons were attached. Only from the leading edge to the main spar was metal covered, all other wing surfaces were covered in fabric.

Both wings were supported by a pair of substantial 'Y-shaped' bracing struts which attached to the underside at the point where the chord was at its deepest. The bottom end of each strut is shackled to the main undercarriage legs.

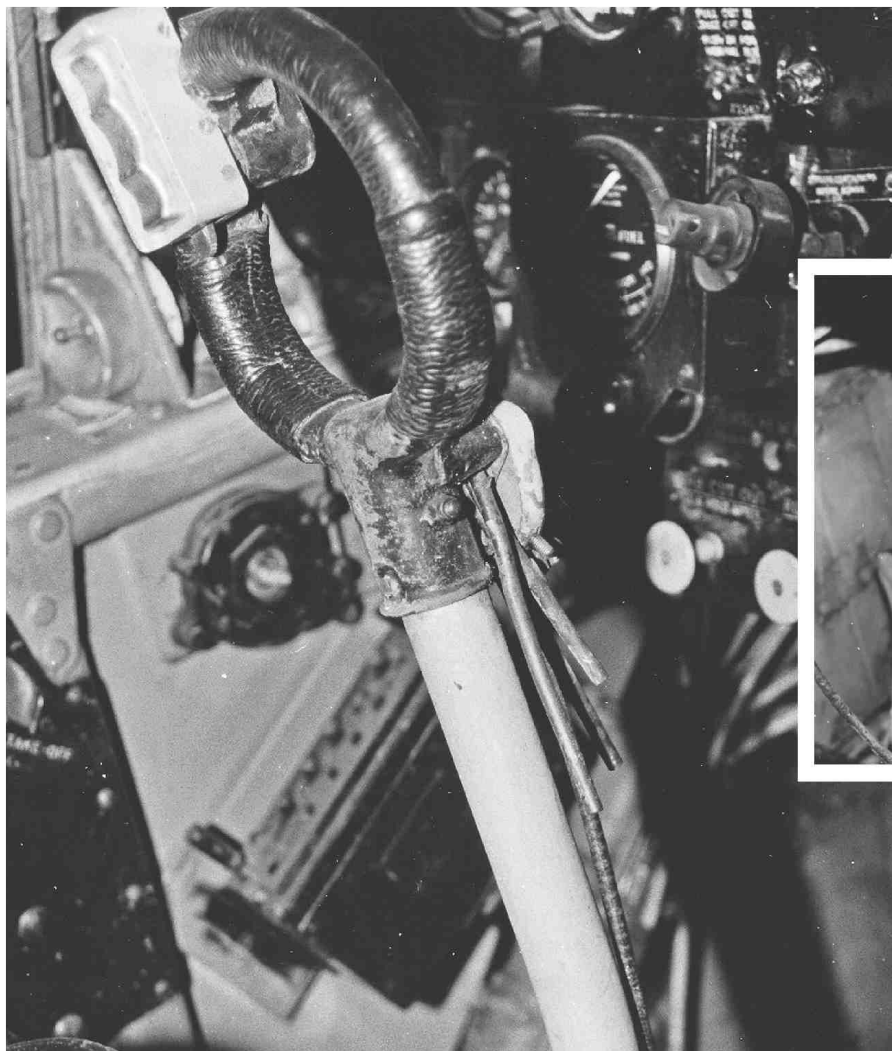
Along the full length of each leading edge were three-section slats which operated along rollers on three runners in the main spar. Each was mounted on adjustable fittings so that the correct setting of space between the slat and the wing could be set. The slats had pneumatic dampers as well to remove oscillations. The two outer flap sections operated independently of the inner ones. Handley Page flaps, positioned on the inner trailing edge were connected to the inboard slats and raised up and down automatically. The ailerons were statically and dynamically balanced, of all metal construction and fabric covered.



The pilot's seat, with padding removed, reveals the seat adjusting hand wheel on the far side.

Undercarriage

The cantilever undercarriage was constructed from a single length of hollow aluminium which was bent into a horseshoe shape. The Dowty internally-sprung wheels, fitted with Dunlop tyres, were mounted on stub axles and were joined to the forward fuselage by A-shaped fittings and bolts. The wheels were



◀ The control column complete with gun firing button (one of many different types fitted to the 'Lizzie') and just obscured by the grip is the aircraft's brake operated lever.

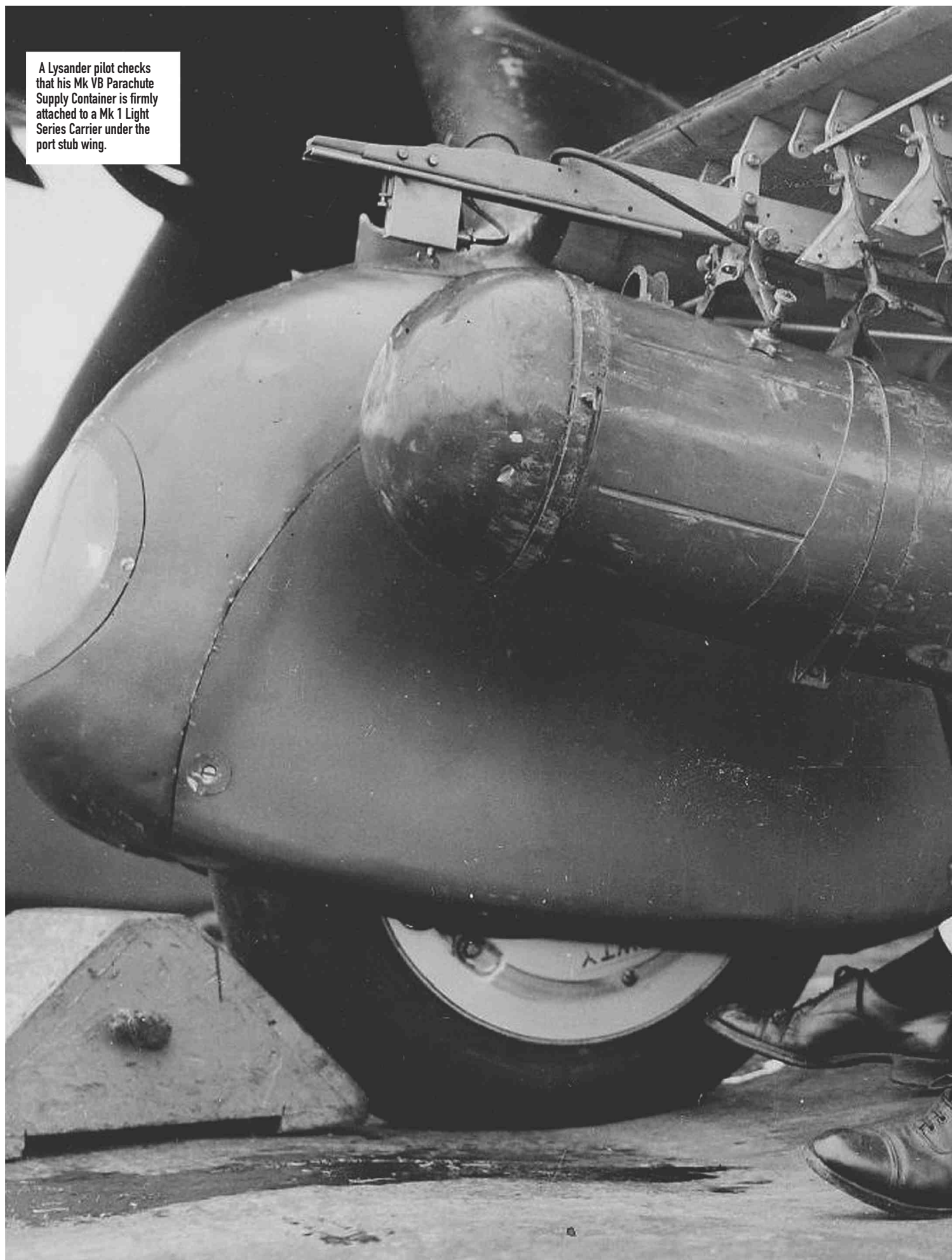


▲ A standard Air Ministry Type P10 compass is fitted into this Lysander. This was the most common type of compass used by RAF during the Second World War and beyond, and it could be found in most types from the Tiger Moth to the Lancaster.

▼ The starboard instrument panel in the rear cockpit of a Lysander included the battery ammeter, charge regulating switch, voltmeter, and battery ammeter gauges along the bottom of the panel.



A Lysander pilot checks that his Mk VB Parachute Supply Container is firmly attached to a Mk 1 Light Series Carrier under the port stub wing.



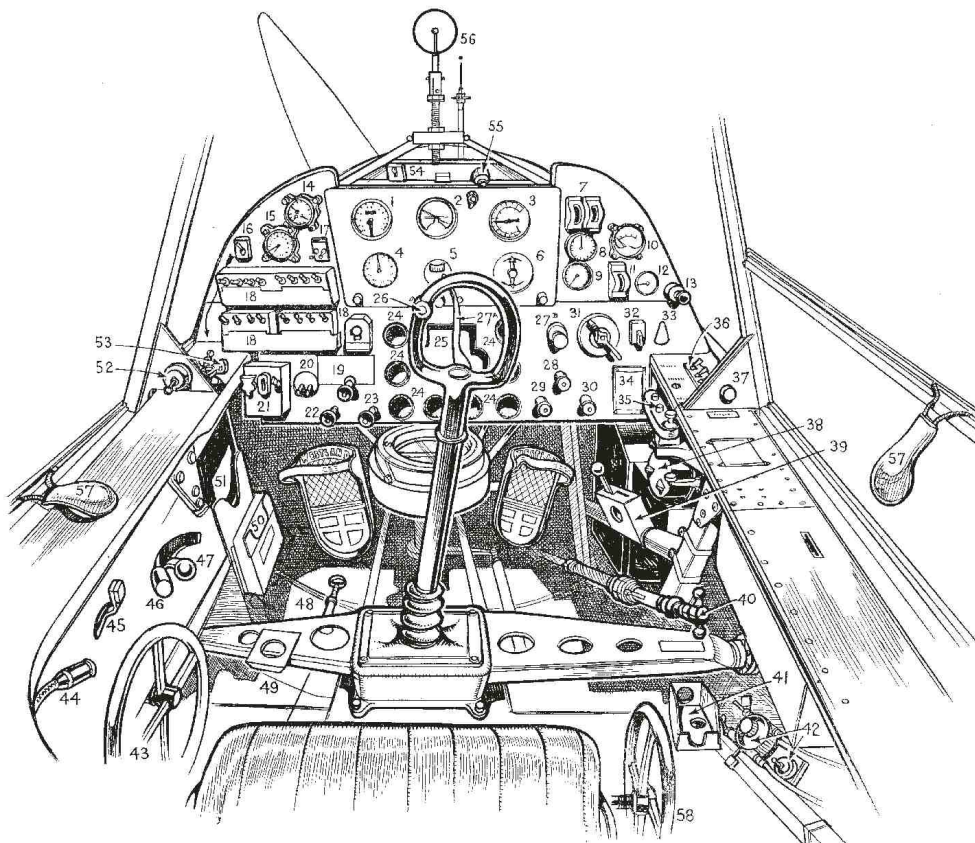




▲ Another view of the rear cockpit and the rear of the auxiliary fuel tank, which was directly above the main 95-gallon De Bergue Semape self-sealing aluminium fuel tank. The auxiliary fuel tank could raise the endurance of the Lysander to eight hours.

◀ The port side of the rear cockpit with the rear of the auxiliary fuel tank, located between the two crew, visible on the extreme left. At the top can be seen the port rear cabane structure to which the rear spar is connected.

Inside the cockpit of the Westland Lysander



- (1) Airspeed indicator
- (2) Artificial horizon
- (3) Rate-of-climb indicator
- (4) Altimeter
- (5) Direction indicator
- (6) Turn-and-bank indicator
- (7) Fuel pressure gauges
- (8) Boost gauge
- (9) R.P.M. indicator
- (10) Cylinder temperature
- (11) Oil pressure gauge
- (12) Oil thermometer
- (13) Switch for compass lamp
- (14) Brake and gun air-pressure gauge
- (15) Clock
- (16) Flare isolating switch
- (17) Magneto switches
- (18) Bomb selector switches
- (19) Airscrew pitch control
- (20) Bomb fusing switches
- (21) Bomb-release master and jettison switch
- (22) Carburettor cut-out control
- (23) Rudder-bar adjusting control
- (24) Stowage for eight signal cartridges
- (25) Oxygen regulator
- (26) Gun firing button
- (27a) Brakes operating lever
- (27b) Priming pump
- (28) Oil warming control
- (29) Cockpit heating control

LYSANDER MK I, II & III

TYPE

Single-engine, two-seat, high-wing army co-operation and/or ground support monoplane

POWERPLANT

(Mk I) One 890hp Bristol Mercury XII 9-cylinder, air cooled, supercharged radial engine. (Mk II) One 905hp Bristol Perseus XII. (Mk III) One 870hp Bristol Mercury XX or 30.

DIMENSIONS

Span: 50ft
Length: 30ft 6in
Height: 14ft 6in
Gross wing area: 260 sq ft

WEIGHTS

Empty: (Mk I) 4,044lb. (Mk II) 4,160lb.
(Mk III) 4,365lb.
Max take-off: (Mk I) 5,920lb. (Mk II) 6,030lb.
(Mk III) 6,330lb. (Mk IIIA(SD)) 10,000lb.

PERFORMANCE

Max speed at sea-level: (Mk I) 211mph. (Mk II) 206mph.
(Mk III) 209mph.
Max speed at 10,000ft: (Mk I) 219mph. (Mk II) 230mph. (Mk III) 207mph.
Minimum flying speed: (Mk I & II) 54mph.
(Mk III) 56mph.

Max dive speed:

Rate of climb to 10,000ft:

Service ceiling:

Take-off run to 50ft:

Landing run from 50ft:

Range on internal fuel:

(All marks) 300mph.

(Mk I & II) 6.9 min. (Mk III) 8 min.

(Mk I & II) 26,000ft. (Mk III) 21,500ft.

(Mk I) 250yds. (Mk II) 245yds.

(Mk III) 305yds.

(Mk I) 310yds. (Mk II) 330yds.

(Mk III) 340yds.

600 miles at 150mph. (III(SD))

450 mile radius of action

ARMAMENT

Gun armament:

A pair of free-firing .303in Browning machine guns in wheel-spats and a single or a pair of Lewis machine guns in the rear cockpit. Option for a pair of 20mm Oerlikon or Hispano cannon in lieu of stub winglets.

Bomb armament:

Up to two 250lb GP/HE, four 112lb Mk VII GP/HE or eight 20lb HE bombs carried on stub winglets (Universal No.1 Carrier); four 20lb bombs carried under fuselage on a Light Series Mk I Bomb Carrier 'Toast Rack'. Option of a SBC (Small Bomb Container) designed to carry 4lb, 25lb and 30lb IBs.

EXTERNAL STORES

Two M-Type dinghy containers and four smoke markers; two SCI (Smoke Curtain Installation) canisters; two Mk VB parachute supply droppers; a single 150-gallon long-range fuel for the Mk IIIA(SD).

- (30) Air intake control
- (31) Priming cock
- (32) Starting magneto switch
- (33) Starter push-button
- (34) Engine data plate
- (35) W/T Morse key
- (36) Switchbox for navigation lamps, gun heating and pressure-head heating
- (37) Gunners warning lamp push-button
- (38) Identification lamps switchbox
- (39) Forced landing flares release
- (40) Cowl-gills control
- (41) Signal pistol stowage
- (42) Wireless remote controls
- (43) Tail-plane incidence hand wheel
- (44) Microphone and telephone socket
- (45) Flap locking lever
- (46) Bomb firing switch
- (47) Throttle and mixture levers
- (48) Camera sight which is used through lens in floor
- (49) Camera control mounting
- (50) Stowage for course and drift calculator
- (51) Stowage for maps
- (52) Landing lamp switch
- (53) Fuel cock
- (54) Reflector gun-sight master switch
- (55) Dimmer switch for reflector gun-sight
- (56) Ring and bead gun-sight
- (57) Sliding window catch
- (58) Seat adjusting hand wheel

faired over with large streamlined spats, which had a removable panel to expose the entire wheel and tyre to allow for changing and access to the Dunlop braking system. The faired legs concealed cables, fluid lines and the ammunition chutes and, on the port side, footsteps allowed the pilot to access the cockpit. Harley landing lights, one on each side, were fitted into the front of the wheel spats.

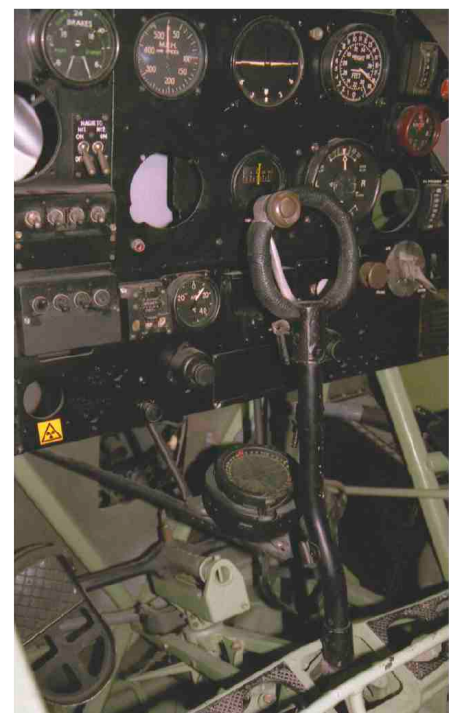
The tail wheel was a Dunlop Ecta with a Dowty shock absorber which could castor and self-centre. The Mk IIIA differed by having a Lockheed tail wheel unit with a slightly bigger tyre.

Powerplant

Power for the Mk I and Mk III was provided by the Bristol Mercury nine-cylinder, air-cooled, single-row piston radial engine. Designed by Roy Fedden of the Bristol Aeroplane Company, this highly successful powerplant went on to be fitted in 42 different aircraft. The unit used in the Mk I was the 890hp Mercury XII supercharged engine which drove an 11ft, two-pitch de Havilland three-bladed propeller.

The Lysander Mk II was powered by the equally successful Bristol Perseus engine, also designed by Fedden. The Perseus differed from the Mercury XII by taking advantage of the sleeve valve principle allowing the engine to operate at higher speeds, in theory allowing a smaller sized unit to produce the same power as a larger one and with more efficiency. The Perseus saw RAF service with the Botha, Flamingo and Vildebeest, FAA service in the Roc and Skua and civilian service in the Empire boats and Scylla. The Mk II used the 905hp Perseus XII, driving the same propeller as the Mk I.

The final main Lysander variant, the Mk III, used the 870hp Mercury XX or 30 engines, once again driving the same de Havilland propeller as the other marks. The Mercury 30, the penultimate in this range of engines, only differed by having a few crankshaft modifications. Later developed into another Bristol engine success story - the Pegasus - approximately 20,700 Mercury engines were built and production did not end until 1945. ♦



The cockpit of the Imperial War Museum's Lysander IIIA, V9673, before it was strung from the roof of Airspace Exhibition Hall, pictured in February 2004. *Martyn Chorlton*

(PORT SIDE)
FOR SPAT
GUNS.
AND
EATER.
Y TANKS.
Y DRUMS.
NCH.
;
SIGHT FITTED
)
ING WHEEL.
FINGERS. (MAX.)

MARK III TAILWHEEL

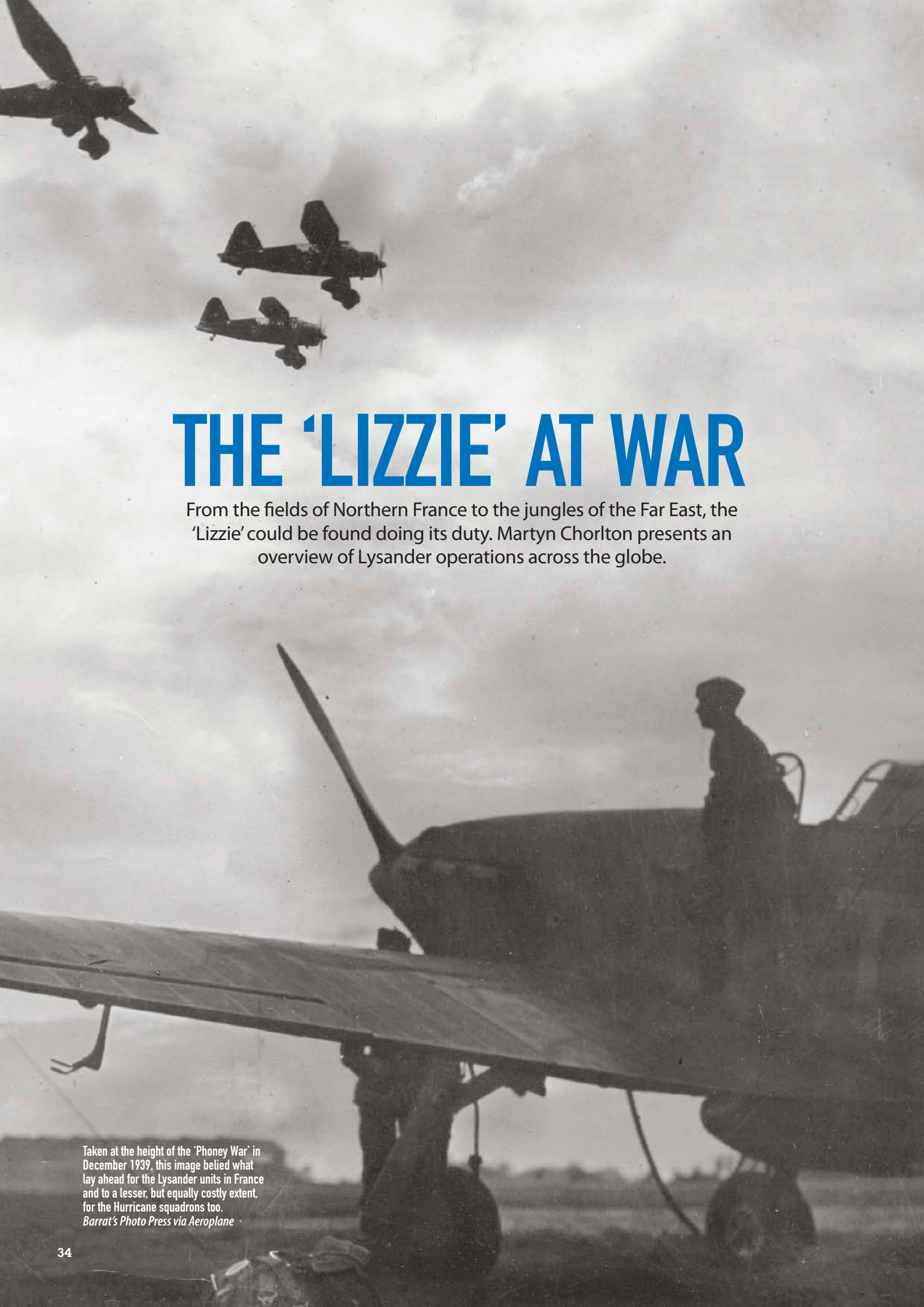
SCALE, FEET :



A Lysander of 16 Squadron receives a minor service between sorties during an exercise from Old Sarum in 1939. 16 Squadron was first formed at Old Sarum when the Co-operation Squadron of the School of Army Co-operation was redesignated on April 1, 1924. Initially equipped with the F.2B Fighter the Atlas followed in 1931, the Audax in 1933 and the Lysander from May 1938. *Aeroplane*





A black and white photograph of a biplane in flight against a cloudy sky. The biplane is seen from a low angle, with its wings and fuselage clearly visible. The sky is filled with soft, white clouds. The overall tone is historical and dramatic.

THE 'LIZZIE' AT WAR

From the fields of Northern France to the jungles of the Far East, the 'Lizzie' could be found doing its duty. Martyn Chorlton presents an overview of Lysander operations across the globe.

Taken at the height of the 'Phoney War' in December 1939, this image belied what lay ahead for the Lysander units in France and to a lesser, but equally costly extent, for the Hurricane squadrons too.
Barrat's Photo Press via Aeroplane

4 Squadron during peace-time manoeuvres from Odiham in 1939. Only a few months after this photo was taken the unit joined 13 Squadron to become the first Lysander units in France.
Via Aeroplane

The phoniest of wars

It was in the middle of a large mobilisation exercise that 50 (Army Co-operation) Wing at Odiham was ordered to prepare for war for real on August 23, 1939. From that day onwards, the personnel of all Lysander squadrons knew that they were the most likely to be sent across the Channel in support of the army. On the declaration of war at 1100hrs on September 3 all Lysander units were on tenterhooks but they would clearly not be advanced into France until the BEF, which they would support, was in position. Two weeks later, the ground parties of 4 and 13 Squadrons were ordered to move by train to Portsmouth and onwards by sea to Cherbourg. It was then a long train journey to Monchy-Lagache.

The aircraft of 4 and 13 Squadrons both left Odiham on September 24, landing at Mons-en-Chaussée the same day. While 13 Squadron remained at Mons-en-Chaussée, 4 Squadron moved to Monchy-Lagache. The second pair of Lysander units, which were part of 51 (Army Co-operation) Wing, 2 Squadron and 26 Squadron, arrived at Abbeville/Drucat on September 29 and October 3, respectively. The Lysanders that would support the BEF during their campaign in France had now been fully deployed.

While the German forces recovered following their success in the east, very little activity occurred during the first few months of the war, hence the popular title for this period being 'The Phoney War'. Faith in holding back the enemy was over-confidently placed in the Maginot Line, although the BEF had no such luxury as they were deployed along the exposed French/Belgian border. The scene was now set with the two Lysander wings attempting to cover the same area that needed over 20 RFC and RNAS squadrons to cover it just over 20 years earlier.

Back in Britain, additional Lysander units were in the making when 614 Squadron moved to Odiham on October 2. The auxiliary squadron's 'B' Flight was used to briefly create 614A Squadron on October 9 which, in turn, provided the nucleus for the latest Lysander unit, 225 Squadron. 613 (City of Manchester) Squadron also moved into Odiham on October 2 with the Hector and Hind, but it was not destined to receive the Lysander until April 1940.

16 Squadron was prepared for service in France after it had moved closer to a war

footing by moving from Old Sarum to Hawkinge on February 17. On April 13 the squadron crossed the Channel bound for Amiens and settling at Bertangles the following day. During April squadron strength remained at twelve Lysanders but this was increased to 18, giving each unit the ability to operate a three flight system, rather than the traditional two. Squadron aircraft serviceability was a credit to the ground crews during this period as well, despite being handicapped by the fact that all maintenance was performed outdoors, regardless of the weather.

Battle of France

In late April the 51st (Highland) Division was repositioned on the Maginot Line and the French requested that the RAF supply close air support of the region. A combined unit of 2 Squadron's Lysanders and 87 Squadron's Hurricanes were moved to Spincourt on May 5 but had barely settled in when the German forces began their attack on May 10. With haste, the short lived combined unit was withdrawn back to its original airfields in preparation.

At this stage deployment was as follows; 50 Wing at Athies, under the command of Gp Capt A R Churchman DFC, controlled 4, 13 and 16 Squadrons, while 51 Wing at Dieppe, commanded by Wg Cdr A H Flower CBE, was in charge of 2 and 26 Squadrons.

A large German attack via Belgium was already being prepared for and a prearranged plan to move the BEF forward to a position in line with the River Dyle was instigated. This left the nearest Lysander units over 50 miles away from the front and even though all of

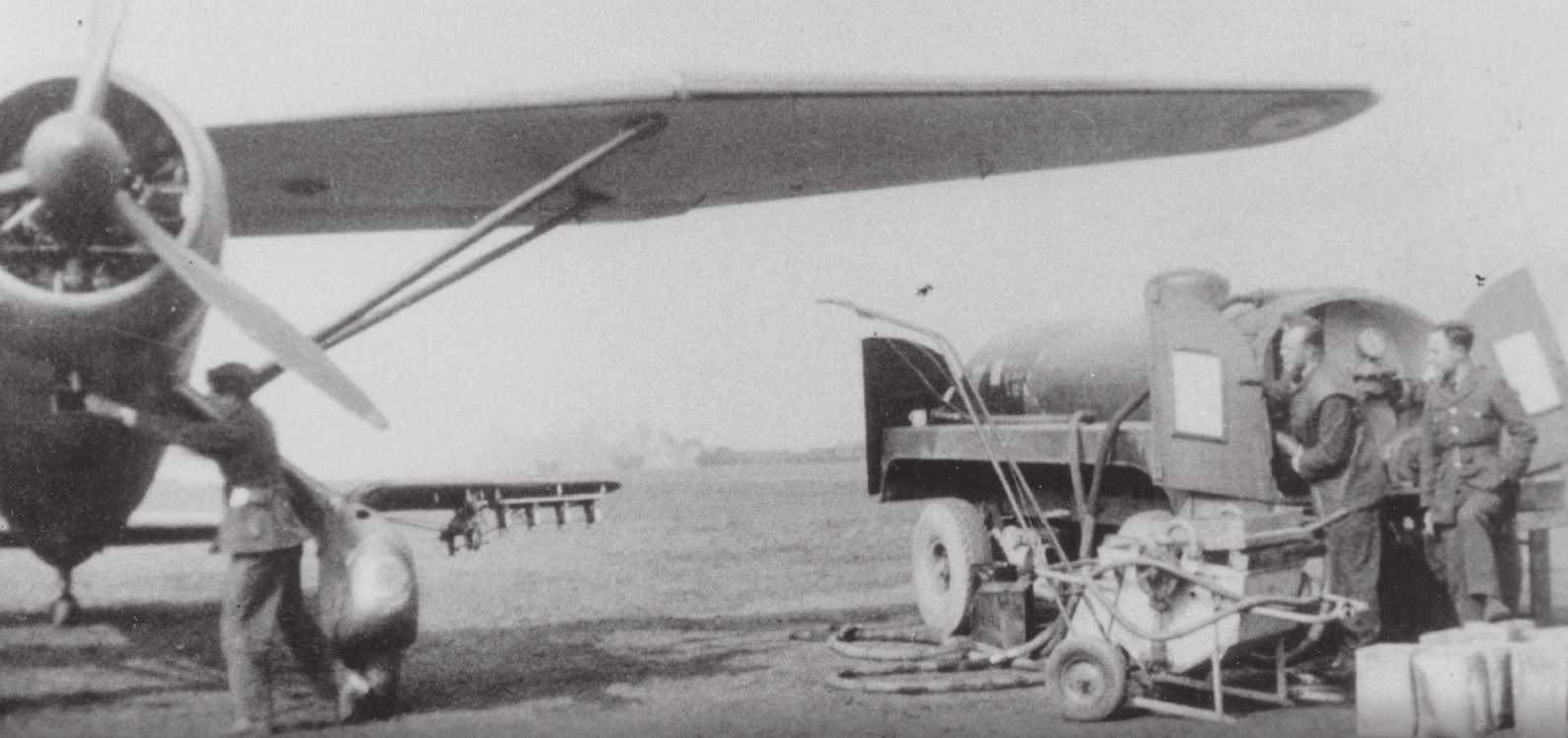
the squadrons were preparing ALGs (Advanced Landing Grounds), very few were ready.

26 Squadron was the first to be involved in the German blitzkrieg when the Luftwaffe bombed Dieppe forcing the unit's Lysanders into the air, rather than risk their destruction on the ground. Other units began the task of flying over the new BEF lines and photographing them which inevitably involved encounters with enemy aircraft. 4 Squadron had their first contact with the enemy on May 13 by Plt Off B Malins and LAC 'Ginger' Drew, who were lucky to make it back to Ronchin after receiving some unwanted attention from several German anti-aircraft guns. As the Lysanders encountered an ever increasing number of enemy fighters it was only a matter of time before the first casualty was recorded. Fg Off P W Vaughan and his Air Gunner AC E Mold in P9063 failed to return from a tactical reconnaissance after leaving Monchy-Lagache at 0730hrs.

On May 15 it was decided that the 4 Squadron should move forward to Ronchin while still maintaining detachments at Aspelaere and Clairmarais. By midday on May 16 the move was complete, with 'B' Flight now operating from the ALG at Aspelaere. 'B' Flt found itself covering the massed withdrawal of 2 Corp and it was another frantic day of action for 4 Squadron. Plt Off Langley and his Air Gunner, LAC J H Gillham, came under attack from six Bf110s while flying an observation sortie near Louvain. Despite the odds, Gillham claimed to have shot down one of the fighters before their aircraft, L4814, force-landed near Lille.

A Lysander Mk II, of 13 Squadron, has its Perseus XII sleeve-valve engine warmed through at Mons-en-Chaussée during the winter of 1939/1941 when the 'Phoney War' was at its height.





From right to left, Fg Off Scott, LAC Evans and LAC Gill attempt to start the Mercury XII nine-cylinder engine of a 2 Squadron Lysander Mk I at Abbeville in October 1939. Having suffered heavy losses the squadron left France on May 16, 1940.

By May 19 the German advance was at the point of overrunning the BEF's Air Component airfields. The inevitable withdrawal of the Lysander squadrons was now being controlled from across the Channel as communications with HQ, British Air Forces in France had completely broken down. 2, 13, 16 and 26 Squadrons were ordered to withdraw to airfields in the south-east of England, which were given the codename 'Back Violet', while those that remained in France were ordered to move to the lower Seine area, codenamed 'South Violet'. 2 Squadron was the first to withdraw via Boulogne on May 19 arriving at Lympe the following day and then settling at Bekesbourne for duties still in support of the BEF. The rapidly depleting 4 Squadron was withdrawn from its ALGs to Clairmarais on May 21 losing two more aircraft to Bf109s in the process. By the following day the remnants of the squadron were at Dunkirk and 4 Squadron was now effectively out of the battle.

Some army co-operation support was still available to the BEF across the Channel as 13 Squadron joined 2 Squadron on May 29 and 16 and 26 Squadrons were operational at Lympe. Following the complete withdrawal of 4 Squadron, which by May 24 was at Ringway, it was replaced by 613 Squadron which was detached from Odiham to Hawkinge. Along with the other Lysander units, 613 Squadron took part in supply drops of food, water and ammunition to BEF troops at Calais.

Armed tactical reconnaissance sorties were also flown by 16, 26 and 613 Squadrons while the BEF began its evacuation from the beaches at Dunkirk. Those forces which did not make for Dunkirk headed for Cherbourg instead, but even at this late stage not all of the RAF had evacuated the area. Sqn Ldr T K Lacey was in charge of a small section at Rouen Boos airfield and from May 23 into early June he directed regular reconnaissance operations with a few Blenheims and Lysanders. By June 3 this enclave of the RAF was taken over by 10 Air Intelligence Liaison Section which ordered the remaining aircraft to carry out a tactical

reconnaissance of Somme bridges and enemy positions near Abbeville. Two Lysanders were involved in what was to be their last operation over France. One failed to return, the last of 62 Lysanders lost in France out of the 90 originally on strength; while a further 17 were SOC (Struck off Charge). 13 and 26 Squadrons alone had lost 23 pilots and air gunners and 35 aircraft between them in the space of four weeks!



Polish ground crew of 309 (Ziemia Czerwienka) Squadron remove a Williamson F.24 camera from Lysander Mk IIIA, V9437, at Dunino in 1941. Formed at Abbotsinch with the Lysander Mk III on October 7, 1940 the Polish unit operated the 'Lizzie' until the arrival of the Mustang Mk I in August 1942.

Anti-Invasion

After the dispersal of the Lysander squadrons operating from 'Back Violet' airfields, all thoughts were focussed on how Britain could stop the Germans from invading. Lysanders now found themselves being used for armed coastal patrols along the south and east coasts of the country. Several flights were allocated phosphorous bombs which, at various points along the coast, would be dropped into fuel that had been pumped into the sea; one of a multitude of anti-invasion ideas. Several Lysander stations were also stocked with gas bombs in case the Germans used chemical weapons during the invasion.

The Lysander was also heavily involved in the problem of Ireland, which was neutral

during the Second World War. Britain was fearful that the Germans would use the country as a stepping stone to attack Northern Ireland and then on to the mainland. 416 Flight, based in Northern Ireland, was formed with Lysanders to support the many British soldiers based in the country and Ireland also bought the type for its own coastal patrol duties.

By now, there was no shortage of Lysanders available in Britain but MAP (Ministry of Aircraft Production) decided by mid-1940 that all focus should be on fighter and bomber production and not army co-operation machines. Despite attempts to expand Lysander production to Doncaster, Yeovil production continued with the Mercury XX-powered Mk III.

Various ideas were proposed and trialled by Westland for specialist 'anti-invasion' Lysanders but once the threat had passed, all thoughts turned back to the idea of taking the fight back to the enemy. With this in mind three new Lysander units were formed in September 1940. First was 239 Squadron at Hatfield on September 18 from flights provided by 16 and 225 Squadrons. Next was 241 Squadron on September 25 at Longman from the 'A' Flights of 4 and 614 Squadrons and finally 268 Squadron on September 30 at Bury St Edmunds from 2 and 26 Squadrons. The one and only allied Lysander squadron formed a few days later at Abbotsinch on October 7 in the shape of 309 (Ziemia Czerwienka) Squadron, specifically to carry out army co-operation training for Polish forces based in Scotland.

This resurgence of Lysander units helped to bring about the formation of Army Co-operation Command on November 17 under the control of Air Marshal Sir A S Barrett KCB, CMG, MC. Army Co-operation Command, was divided into two groups. These were 70 (Training) Group which looked after anti-aircraft co-operation units (AACU) and 41 and 42 (Army Co-operation) Operational Training Units (OTU) and several target-towing flights (TTF) based at Old Sarum and Andover. The



second group – 71 (Army Co-operation) Group – controlled the activities of 2, 4, 13, 16, 26, 225, 231, 239, 241, 268, 309, 613 and 614 Squadrons.

However, despite the large organisation, the Lysander had become the subject of serious questions regarding the aircraft's capability as an army co-operation machine. Following the Battle of Britain senior staff had time to analyse the lessons of France and it was clear that an aircraft with the performance and armament of a fighter was required for the role. What had been asked of the Lysander were two completely different tasks, namely artillery spotting and reconnaissance which were totally incompatible. The result was that the Lysander found itself being replaced by four different types; the Tomahawk and Mustang took over the fighter reconnaissance and the loitering air observation work was now carried out by the Auster and Taylorcraft.

The Western Desert

The first Lysanders to arrive in the Middle East were crated and despatched to Heliopolis in November 1938. The 24 aircraft, serialled L4707 to L4730, were re-assembled and, the following month, two of them were collected by 6 Squadron, based at Ramleh, for evaluation in the anti-terrorist role. At the same time, 208 Squadron was preparing to convert from the Audax to the Lysander at Heliopolis, a task that was complete by January 1939.

Another two-dozen Lysanders arrived at Heliopolis in mid-1939 to cover those already in service with 208 Squadron and the pair that remained with 6 Squadron. By September 1939, 6 Squadron received a full quota of Lysanders to complement the Hardys and Gauntlet fighters it had acquired the previous month.

On the outbreak of war in Europe, both squadrons expected to be shipped back to Britain but the C-in-C, RAF Middle East was adamant that his army co-operation units should stay with the army units that they had exercised with. This was a wise move because when Mussolini saw the success the Germans

Reformed as an Army Co-Operation unit from 'B' Flight of 614 Squadron at Odiham on October 9, 1939, 225 Squadron operated the Lysander Mk II and later Mk III until June 1942. Pictured in mid-1940 whilst operating from Tilshead, Mk II N1256 was transferred to 4 Squadron, Indian Air Force but was destroyed near Kohat on March 20, 1942 following engine failure. Rolls Royce via author

had achieved in France, he brought forward his plans to invade Egypt and declared war on Britain and France on June 10, 1940.

As part of 202 Group, the Lysanders of 208 Squadron were quickly in action tasked with monitoring the enemy's forward positions. Fighter protection was provided for them but losses still occurred such as on June 22, when one of three escorting Gladiators was shot down by CR.42s. Lysanders still managed to score some successes against the enemy, a good example occurred on July 11 when a single machine was looking for a missing patrol from the 11th Hussars. The Lysander crew saw an Italian aircraft landing in the desert to help another downed machine, east of El Adem. The 208 Squadron pilot dived down with his front guns blazing and, as he pulled away, the air gunner opened up as well. The Lysander kept circling above as the Italian aircrew scattered across the desert. After more gun fire both enemy aircraft caught fire giving the Lysander crew a double victory.

On November 10 a 208 Squadron Lysander was photographing Maktala camp when the air gunner spotted half a dozen CR.42s, climbing rapidly, 5,000ft below. The Lysander pilot made a rapid turn for home as the CR.42s began their attack in a line astern formation. The air gunner never gave up firing, despite being wounded in the leg, while the pilot headed for the deck so that the enemy fighters could not attack the Lysander's blind spot. However, at only 100ft above the ground, the Lysander's engine gave up the ghost and a forced landing quickly followed. As the Lysander touched the desert the air gunner's relentless fire paid off and a CR.42 crashed alongside. The air gunner, whose leg had been broken, managed to get his injured pilot out of the wreckage and, not

long after, both were treated for their injuries by a nearby patrol from the 11th Hussars.

Reinforcements for the army co-operation role began to arrive by late 1940. First, 'C' Flight of 208 Squadron had their Lysanders replaced by tactical reconnaissance Hurricanes while 3 (RAAF) Squadron, recently arrived in theatre, was re-equipped with Lysanders. 6 Squadron was ordered to get ready for a move to the Western Desert, a unit that by now had thirteen Lysanders on strength with their 'C' Flight. The flight was moved to Qasaba, Egypt in September for operational training before moving forward to join 208 Squadron. 'C' Flight first saw action from October 1 and by December had rotated with 'B' Flight.

Lysander strength in North Africa was depleted from February 1941 when 208 Squadron was withdrawn to support allied forces in Greece, which was invaded by Italian forces from Albania. This left just 'A' and 'B' Flights of 6 Squadron at Tobruk under the direct control of HQ, 202 Group. The squadron HQ was moved to Heliopolis and 'C' Flight was re-equipped with long-range Lysanders in support of the planned invasion of the Dodecanese Islands, which never came to fruition. By March 1941, 'A' Flight had been re-equipped with Hurricanes at Agedabia for army co-operation with the 2nd Armoured Division and 'B' Flight, retaining Lysanders, took over 208 Squadron's tasking at Barce.

Following Rommel's arrival the British forces were pushed back into Egypt, but a large garrison held out at Tobruk and amongst their forces were the Lysanders and Hurricanes of 6 Squadron and a few Hurricanes from 73 Squadron. By April 8 both squadrons were operating from El Gubbi East but in an effort to disperse, 6 Squadron moved to El Gubbi West the following day. It was the same day that 6 Squadron achieved its last Lysander air-to-air victory when Plt Off J E McFall and his air gunner, Cpl Copley, shot down a Ju52/3m during a long-range tactical reconnaissance operation.

6 Squadron held out against constant bombing and strafing attacks until April 19



One of 208 Squadron's first Lysanders, which was delivered in January 1939, was Mk I L4734. After brief service with 13 Squadron, the aircraft was returned to 208 only to be destroyed in an air raid at Palmyra on July 10, 1941. *Via author*

when just four serviceable Lysanders and a Magister left Tobruk at night bound for Maaten Bagush. After a sterling defence by the Hurricanes of 73 Squadron, which were now up against the Bf109Es of JG.27, only four serviceable aircraft remained by April 25 and these were forced to withdraw as well.

This was the last time the Lysander would be in the thick of it in the front line. Its operational role in the desert was, from this point forward, taken over by the Hurricane.

East Africa

In September 1940, 237 Squadron moved to Gordon's Tree, Khartoum to help support the attack by allied forces on Abyssinia and Eritrea. The following month the unit's Audaxes and Hardys were replaced by the Lysander Mk I and Mk II, complemented by Gladiators in March 1941. As the main RAF and SAAF offensive began 237 Squadron joined in on March 30 when three aircraft dive-bombed a military barracks and buildings at Asmara. The following day three more Lysanders dive-bombed an enemy motorised column, 50 miles south of Massawa.

By mid-May the bulk of the Italian forces surrendered and 237 Squadron was moved to the Western Desert where all of the unit's Lysanders were replaced by the Hurricane Mk I in September 1941.

As far as East Africa was concerned only the Lysanders of the Royal Egyptian Air Force were in evidence, conducting anti-submarine patrols over the Red Sea. The only RAF Lysander unit was 1414 Meteorological Flight based at Khartoum which had moved to Egypt by early 1942.

However, the Lysander found one last use in the region following the alarming rate that

the Japanese were advancing across Asia.

There was a fear that Vichy-controlled Madagascar could be used as a base for the Japanese to launch attacks on Africa. In February 1942 the island was occupied by the British and a token force of aircraft, including the Lysanders of 1433 Flight, were established at Diego Suarez from May 1942. The Lysander remained evident on Madagascar until April 1943.

Greece

The Lysander's contribution during the Greek campaign of 1941 was as quick as the German advance. 208 Squadron, having been withdrawn from North Africa, moved into its new theatre at Kazaklar on April 6 immediately organising detachments to Larissa and Pharsala.

Once 208 Squadron had settled in the German advance was already unstoppable and, by April 19, the unit was withdrawn to Elefsis on the outskirts of Athens. By this stage only four Lysanders remained serviceable and these were withdrawn to Argos on the island of Crete on April 22. The unit's Hurricanes remained slightly longer in a brave attempt to provide some air defence but by April 28 the entire squadron was withdrawn to Egypt, then Palestine where it was re-equipped with the Audax.

The Far East

It was as early as March 1938 that the first of many Lysanders had appeared in India and by the following year that country's air force prepared itself for a rapid expansion which would include the Westland-built machine.

In a scene reminiscent of the Battle of France (but with the positions reversed), a 208 Squadron Lysander pays a visit to El Adem, framed by a wrecked Italian Air Force machine.





Formed in Britain in February 1942 with the Lysander Mk IIIA, 1433 Flight played an important role in preventing Madagascar potentially falling into Japanese hands and providing a gateway to the east coast of Africa. The flight operated from Diego Suarez, Maratsipoy, Ivato and Tananarive before disbanding on April 15, 1943.

However, it was not until 1941 that 48 Lysanders were allocated to the Indian Air Force (IAF), the first arriving at the joint RAF/IAF depot at Drigh Road, Karachi. 1 (Indian) Squadron was moved from its North-West Frontier posting by August to re-equip with the Lysander at Drigh Road. By the following month a single flight was on its way back to Peshawar and, apart from one minor landing accident en-route (which was repaired by ground crews being carried in the rear cockpit), all of the Lysanders safely reached their operational airfield.

By November the IAF 1 Squadron's twelve aircraft, which up to this point still belonged to the RAF, were officially handed over to the Governor of Bombay during a ceremony at Peshawar. This would be the first of ten Lysander squadrons for the IAF, all of which would prove invaluable in support of the allied forces along the India border and Burma.

As the Japanese rapidly advanced through Burma, 1 (Indian) Squadron was moved to Magwe the home of 28 Squadron on February 1 with Lysander Mk IIs. That evening the Japanese Air Force bombed the airfield but both squadrons escaped with only minor damage. In response 1 (Indian) Squadron's commanding officer, Sqn Ldr Majumdar, was having none of it and believing the enemy to have come from Mae-Haugsaum in Siam, set out on February 3 to bomb the airfield alone, escorted by a pair of 67 Squadron Buffaloes. Majumdar attacked at low-level, dropping a pair of 250lb bombs on the only hangar on the airfield. The following day Majumdar led a larger unescorted attack on the airfield, destroying a wireless building and hitting several dispersed aircraft before making their escape back to Heho.

With the Japanese advance the Lysander units found themselves spread over a vast area, ranging from supporting the Chinese 5th Army to Mingaladon and the defence of Rangoon. Rough airfields were taking their toll on the Lysander population more than the enemy ever could and several were destroyed when bombs were shaken from their carriers during the take-off run. Despite the efforts of the Lysander crews, the Allies were pushed back into India.

Following this withdrawal Indian squadrons began to receive the Hurricane,

including 1 (Indian) Squadron, while others continued to re-form with the Lysander, such as 4 (Indian) Squadron on February 16, 1942. By the end of the year 4 (Indian) Squadron was conducting army co-operation missions with the 7th Indian Division, but the Lysander in squadron service was rapidly coming to a close.

28 Squadron began re-equipping with the Hurricane from December 1942 and 20 Squadron, whose aircraft had been involved in the siege of Imphal, were re-equipped in January 1943.



Another Lysander unit that managed to shy away from the camera a great deal was 28 Squadron, serving in India. The squadron operated the Lysander Mk II from September 1941 to December 1942, including N1273, which was wrecked at Kohat after taking-off with coarse pitch settings on December 19, 1941. *Via author*

The prototype of the 'Long-Range' variant of the Lysander was Mk III, T1771, here at Boscombe Down at the beginning of A&AEE trials in June 1941. The aircraft's career was to be short-lived because after being delivered to 138 Squadron it was destroyed by fire after it crashed into some trees in fog near Upper Holme, Hungry Hill, Farnham Surrey. The crew, Flt Lt A J de V Laurent and LAC J A Harkness, were killed.
Via Martyn Chorlton





THE AERIAL PIMPERNEL

Ideally suited to SOE (Special Operations Executive) clandestine sorties over France, the Lysander performed this role from late 1941 until September 1944.

Only one aircraft

Following the fall of the Low Countries and France in June 1940, no time was wasted in forming the SOE in London. Its main task was to work closely with the newly formed French underground movement, and agents and supplies could easily be dropped in using unmodified operational bombers. Getting them out was a different story and the only aircraft capable of this was the Lysander.

By August 1940 a pair of Lysanders were made available for SD operations and two more were held in reserve by 419 Flight based at North Weald. In September the flight moved to Stapleford Tawney, on to

Stradishall in October and, from March 1941, Newmarket Heath was also used. By March 1 the unit was redesignated as 1419 Flight with Lysanders, Whitleys and a single Maryland on strength.

The very first special duty operation took place in September 1941 when one agent was flown into France and another was returned, instantly proving that the Lysander was the perfect machine for the job. Pilots selected for these operations were usually very experienced and would have served with at least one army co-operation unit, although the majority seemed to have passed through 2 Squadron at Sawbridgeworth at some stage.

Converted for Special Duties

Following the first successful forays into France the Lysander became specially modified for the task and 20 Mk IIIs and Mk IIIAs were taken from maintenance units for conversion. Under a special MAP contract, named Lysander SCW (Special Contract Westland), the modification work included fitting a 150-gallon long-range fuel tank and lightening the aircraft by removing all armament, armour and any fitting surplus to requirements in the rear cockpit. This made enough room for two agents in moderate comfort, three at a squeeze and if push came to shove, a fourth could lie on the floor. Their night role saw the special Lysanders'



Lysanders were a fairly common sight at Boscombe Down during the later 1930s and early 1940s, but this one was a little different. This is the prototype Lysander Mk III 'Long-Range', T1771, during trials with the A&AEE in June 1941 and later referred to as the 'Special Duties' (SD) variant. The aircraft's long-range came from the substantial 150-gallon fuel tank mounted below the fuselage which was originally designed to be carried internally by a Handley Page Harrow!



An SD Lysander that did see a lot of operational service was V9367 of 161 Squadron. Unfortunately, the aircraft was wrecked on December 17, 1943 on approach to Tangmere from an SOE operation. *Andy Hay/www.flyingart.co.uk*



Images of operational SD Lysanders are very rare and even this photo of Mk IIIA (SD), V9287, was taken at Yeovil before delivery. This Lysander never served with an operational squadron. *Via Author*

under-surfaces painted in a sooty non-reflective black paint and a ladder was fitted on the port side of the fuselage below the rear cockpit, its steps painted in luminous paint. These modifications resulted in the aircraft being redesignated as the Mk III(SD) and the few that had armament and armour left in place were referred to as the Mk IIIA(SD).

A&AEE trials at Boscombe Down in June 1941 gave the SD a radius of action of 450 miles and a cruising speed of 165mph. More importantly, short field trials with four passengers saw the SD variant lift off the ground within 600 yards while a normal load was less than half that distance.

Behind enemy lines

While the tools of the trade were being prepared, 1419 Flight had outgrown itself and on August 25, 1941 was redesignated 138 (Special Duties) Squadron at Newmarket under the command of Sqn Ldr J Nesbitt-Dufort. Two days later the Lysander Flight of 138 Squadron received its first operational pick-up order. The operation was to be carried out on the night of September 4 via Tangmere, where all SOE operations would be staged-through during the war. Nesbitt-Dufort in Lysander Mk III, T1770, was ordered to deliver an agent by the name of Gerry Morel and collect another called J T P M Vaillant de Guelis. At

2300hrs the Lysander took off from Tangmere and, at 14,000ft, crossed the enemy coast bound for Tours. Arriving over the prescribed destination at 0130hrs Nesbitt-Dufort circled for 15 minutes, but no signal from the ground could be seen. It transpired that Guelis had been delayed after his papers had been checked and was frantically pedalling towards the collection point. Realising he was not going to make in time Guelis decided to lay his marker torches in the field he was passing, knowing that Nesbitt-Dufort would be getting low on fuel. The Lysander pilot spotted the upturned torches, laid out in an 'L' shape, and in no time had put the aircraft down,

then taxied back along the length of the 'L' in readiness for taking off again. In less than four minutes Morel was on his way and Guelis prepared to leave France as Nesbitt-Dufort opened the throttle with full boost. The pilot aimed for a gap in the tree shrouded field which appeared to be just a hedge but, as the Lysander flew over it, there was a blinding flash from a high-tension cable that was ripped down. The sturdy machine kept on flying back to Tangmere with no further problems.

Into enemy hands

Another hair raising sortie, again involving Nesbitt-Dufort, took place on January 28/29, 1942 while flying Lysander Mk III, T1508. Tasked with a two-passenger pick-up near Tours, all went well with the landing and take-off but on return, near Bernay at 7,000ft, a foreboding cold-front made up of cumulonimbus clouds blocked the route home. With no chance of climbing over the cloud, Nesbitt-Dufort was forced to fly parallel with the front from east to west until

an opportunity to push through presented itself. This never came and with fuel rapidly disappearing Nesbitt-Dufort decided to push through the black clouds. The inevitable turbulence began to throw the Lysander around and ice rapidly formed on the wings. In no time at all the aircraft became uncontrollable and began to lose height. Nesbitt-Dufort called on the intercom ordering his two passengers to bail out - but it later transpired that they were not plugged in! Diving rapidly restored control again but



Unmodified aircraft were also involved in special duties, including Mk I L4738. The aircraft served with the SD Flight, Boscombe Down, from 1940 until it was SOC on June 21, 1944. *Via author*

by now the fuel was critical and there was no chance of the Lysander making it across the channel. Still covered in ice Nesbitt-Dufort quickly found a suitable field to land in, but a high speed approach saw the aircraft safely down only to over run into a ditch and end up on its nose. The agents in the back of the aircraft jumped in exuberant mood thinking they had arrived in England! In the meantime, Nesbitt-Dufort was desperately trying to burn T1508 but there was so little fuel remaining in the tanks, this proved impossible. Forced to

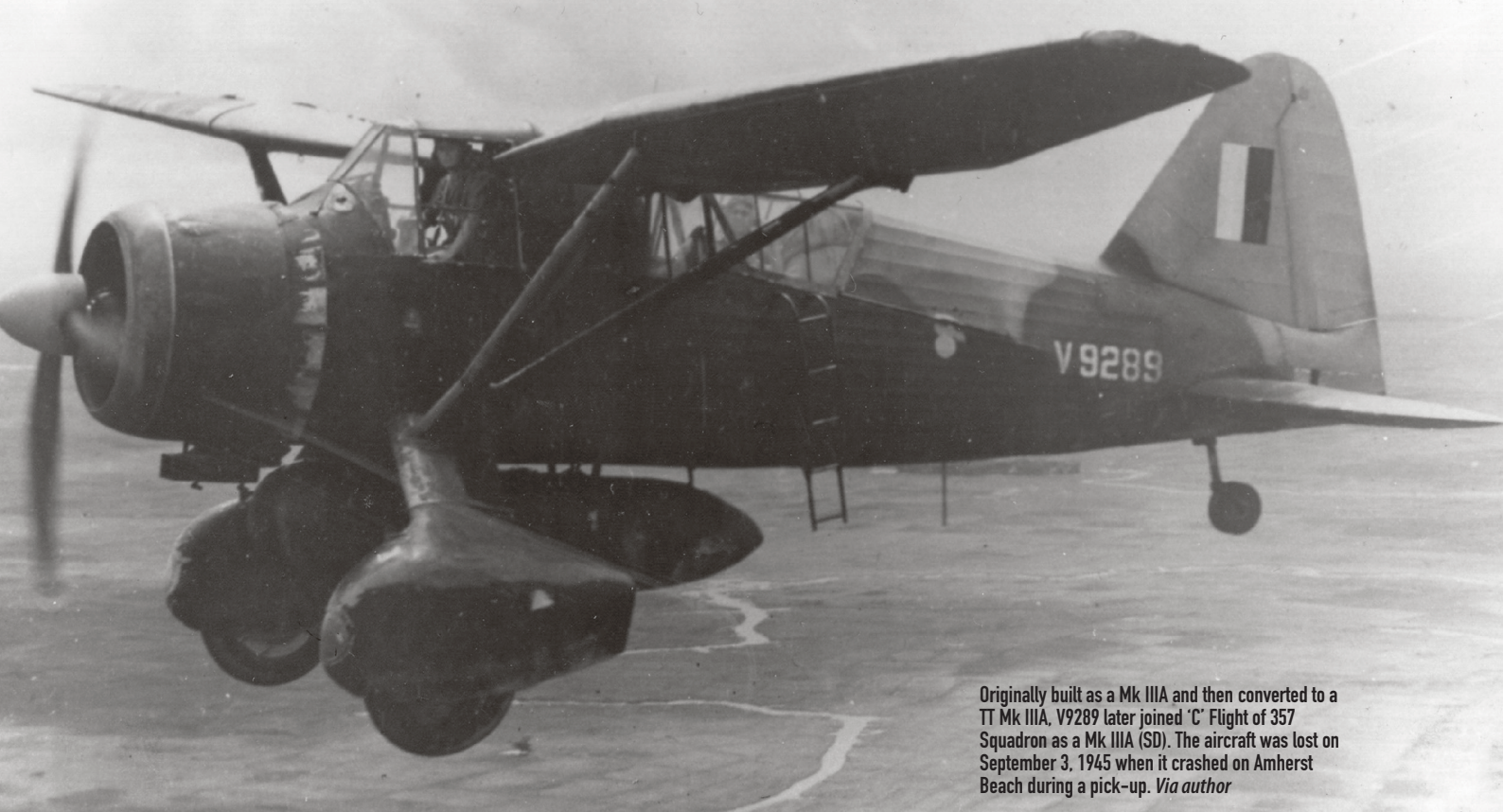
leave the Lysander intact the trio made contact with the local underground and they were soon hidden away from the enemy. However, the Germans now had in their possession an intact SD Lysander, but this did not result in operations ending or changing in anyway.

The momentum began to increase during 1942 with ten successful Lysander operations being conducted, entailing the delivery of 15 agents into, and 18 men and one woman out of, France. The year also saw

138 Squadron's Lysanders transfer to form 161 Squadron at Tempsford on February 15. The unit flew a host of other types but the Lysander would be the only one that would serve with the squadron until its disbandment in June 1945.

The Lysander's workload reached its peak in 1943 when 60 agents were delivered to France and 81 were brought back during 38 operations. The Special Duty Flight of 161 Squadron increased in size to nine aircraft, with another in reserve, during the year.





Originally built as a Mk IIIA and then converted to a TT Mk IIIA, V9289 later joined 'C' Flight of 357 Squadron as a Mk IIIA (SD). The aircraft was lost on September 3, 1945 when it crashed on Amherst Beach during a pick-up. *Via author*

The first of eleven female agents, Francine Agazarian, was delivered by Lysander into France on March 17, 1943. Agazarian operated under the code-name 'Madeline' and unlike several of the others she returned back to England by Lysander in June 1943. Seven of the female agents were executed or died in captivity, while only two others survived and only one other woman agent returned to England in a Lysander. Three further women agents who were parachuted into France were all returned to England by Lysander.

Following the Normandy invasion in June 1944 the need to drop agents into France began to reduce and by September the majority of the country had been liberated. By this time it was calculated that SD Lysanders had flown 43 operations at night over France,

in 73 sorties. This would have meant that up to three Lysanders could have been operating over France on a single night. The final agent tally was 102 delivered to France and 129 brought out.

SD in the Med and the Far East

In February 1944 another clandestine squadron, 148, based at Brindisi, took the first of several Lysanders on strength for the SD role. The aircraft would prove very useful for tasking that involved landing behind enemy lines in Italy and liaising with partisans in Yugoslavia. Five more SD Lysanders were taken on before the year was over to help keep an eye on the unstable political situation in Greece.

The Lysander also briefly saw a period of SD operations in the Far East when 357 Squadron added Mk IIAs to its inventory in March 1945. The ex-161 Squadron aircraft were operated in Burma, from Meiktila, Don Muang and Mingaladon, in support of Force 136 and agents working behind the Japanese lines. However, the rough jungle airstrips and the Lysander's undercarriage were not a happy marriage and at least four aircraft were wrecked by July 1945.

These 'Lizzies' were the last to see operational service during the Second World War, and the few that survived the jungle strips remained the only ones that would still be operational in peacetime. Their service continued until November 7, 1945 when 357 Squadron was disbanded. ❖



Lysander Mk IIIA TT, V9815, of 357 Squadron which was DBR in a heavy landing in Burma on August 4, 1945 only ten days before the Japanese finally surrendered.

'SPECIAL DUTIES' UNITS AND THEIR AIRCRAFT

419 Flight

(Mk I) R2625, R2626; (Mk III) R9027

1419 Flight

(Mk III) T1508, T1770, T1508

138 Sqn

(Mk I) R2625, R2626; (Mk III) T1508, T1770, T1771

148 Sqn

(Mk I) R2640; (Mk III) T1672; (Mk IIIA) V9498, V9541, V9615; (Mk III TT) R9009, T1456, T1458, T1583, T1642, T1679, T1692, T1750; (Mk IIIA TT) V9670, V9707, V9816, V9821

161 Sqn

(Mk I) R2626; (Mk III) R9106 'K', P9129, R9125, T1503, T1770; (Mk IIIA) V9283, V9297, V9326, V9353, V9367, V9375, V9405 'B', V9428, V9490 'H', V9548 'D', V9595, V9597, V9614, V9664, V9673 'J', V9674 'K', V9718, V9723 'H', V9737, V9738, V9748 'D', V9749 'M', V9822 'E', V9858; (Mk III LR) R9117; (Mk III TT) T1446, T1651, T1688, T1707; (Mk III TT/SD) T1618

357 Sqn

(Mk III) V9295; (Mk IIIA) V9303, V9512, V9649, V9665; (Mk III TT) T1532, T1688; (Mk IIIA TT) V9289, V9494, V9495, V9808, V9815, V9818, V9867, V9885, V9889

▼
'RAF LYSANDER RESCUES WOUNDED AMERICAN OFFICER FROM THE BALKANS'. An unarmed RAF Lysander aircraft, piloted by Fg Off H Attenborrow of New Southgate, London, made a daring flight of over 500 miles from an airfield in Southern Italy to pick up a severely wounded American officer at a Partisan landing strip in the heart of the German occupied Balkans. The American officer was in great pain from the severe wounds he had received as result of enemy action and unless he received immediate expert medical attention, would only have lived for twelve hours. Well within the time limit, and for most of the dangerous journey unescorted, the Lysander removed the American officer and brought him safely back to an Italian airfield. Here an ambulance, a doctor and a medical team were waiting and rushed him to a nearby hospital to receive expert treatment. (Original Caption). British Official Photograph No. CAN 3133 via author This epic rescue by Attenborrow was carried out by a 148 Squadron Lysander Mk IIIA in September 1944 from Brindisi. This diverse unit also operated the Halifax Mk II and V and Stirling Mk IV at the same time.





Only identifiable as 'Z', this Lysander is about to embark on a sortie carrying eight 20lb Mk I bombs under each of its stub wings. The stub wing was the most versatile of attachments and a variety of stores could be carried below it. Other offensive configurations included four 112lb Mk VII bombs, four 120lb Mk I bombs or even a pair of 250lb bombs. *Aeroplane*



ARMY CO-OPERATION COMMAND

Sampled from Britain's Wonderful Air Force (circa 1941) edited by
Air Commodore P F M Fellowes DSO



Reformed at Old Sarum on April 1, 1924, 16 Squadron remained a dedicated army co-operation unit for almost two decades initially with the F.2b, Atlas and Audax before receiving the Lysander Mk I in May 1938. This peaceful scene, most likely before the outbreak of the war, shows a Leading Aircraftman taking down a message using a portable radio transmitter. *Aeroplane*



The pilot of the Lysander has just returned from a reconnaissance flight and is making his report to the A.I.L.O. (on right). A despatch rider stands by and a machine gunner keeps a look-out for enemy aircraft. The mobile HQ on the right is equipped with wireless by means of which it keeps in touch with aircraft whilst on patrol.



'Interpretation Staff at Work'. An army co-op aircraft has returned from a photographic reconnaissance and the prints are now in the hands of the interpretation staff. With the aid of stereoscopic and other viewing devices they are able to gather valuable and highly accurate information regarding the disposition of enemy troops upon which the army commander will base his future campaign.

Duties of the Co-op Squadrons

The duties of the RAF to the Army, many as they are, resolve themselves into two main aims which, quite bluntly, are first to find the enemy, and second to hit him. Sometimes, but by no means necessarily, the achievement of the latter immediately follows that of the first. Frequently, however, to hit there and then would be of negligible or even negative value, whereas the primary locating might have been vital. Information may be valueless if the enemy knows that it has been discovered.

The original conception of air co-operation in 1914 was that the eyes of the men up aloft should also be the 'eyes' of the troops on the ground. 'What,' for example, 'is happening on the other side of that hill?' To such questions as this every military commander since the dark ages has sought an answer; who better placed than the pilot of an aircraft to supply it?

Air reconnaissance is of many types. Strategic reconnaissance (Strat. R) is intended to penetrate far beyond the enemy's outer defences, and provide information as to movements, concentrations, or the mere presence of troops railway stock, motor transport, supply dumps and so on. All such information is invaluable for the prosecution of a strategic aim. The depth of this reconnaissance into enemy country is limited, of course, only by the severity of opposition encountered and by the aircraft's radius of action on which fuel consumption imposes its restrictions.

Tactical reconnaissance provides information from above the immediate battle-front and with regard, for example, to movements of troops actually in the area, to signs of attacks being developed, such as additional supply columns being brought up, reinforcements concentrating on a particular flank, and the movement of armoured

vehicles into one particular area, and equally to indications that a retirement is imminent. All these items of information enable the enemy's next move to be predicated to greater or less extent so that he may be forestalled in defence or harassed in attack. Furthermore, they confirm or amplify information from other sources such as captured documents, prisoners of war, secret agents, and reconnaissance by troops on the ground. The smallest snippets of information combined with the larger picture which air reconnaissance provides can be fitted together like a jigsaw puzzle and provide the main basis for the plans of campaign.

Before leaving the subject of strategic and tactical reconnaissance, brief reference must be made to air photography. Cameras are of the greatest assistance in elucidating and confirming the pilot's reports for which, of course, he has had to rely on observations. Many photographs taken from the air in the second Great War have displayed a mass of information, much of which could be obtained from by a layman, let alone a trained interpreter of photographs. After very little practice, and particularly with the use of stereoscopic pairs which considerably exaggerate the steepness of sloping ground, throwing it into almost violent relief, and making all objects stand sharply out, a mass of information can be obtained which the human eye could never assimilate, especially from a fast moving aeroplane.

Vertical photographs are extensively used, but oblique photographs can also be of great assistance particularly for amplifying details of even the largest scale map. With little imagination one can understand how much easier it is for a company commander, told to roundup a machine-gun nest, if he is given a photograph showing walls, hedges, sunken roads, and so on, which can help him to make a hidden approach.

Mission sortie

After Dunkirk, however, when the army of the British Expeditionary Force was fighting a rear-guard action across the Somme and the Seine into Brittany, a large number of reconnaissance flights were successfully carried out. Valuable information thus obtained enabled military commanders to make the best use of such resources as they had available.

During that trying time a system was evolved that later proved of considerable value. It was first of all known as the 'tip-and-run sortie,' and though the system remains, the title, has been changed since, perhaps, it conjures up to some extent the unworthy picture of some timid airman 'tipping' over his own forward troops, taking one quick look, and then running 'like a hare.' The peace time plan of an ordinary reconnaissance sortie was that the pilot would be given an area with reference to which he was to report movements of all enemy troops, their general trend, and any concentrations observed. The 'mission sortie,' as it is now termed, differed from this, and gave him definite tasks to perform with minimum dalliance over enemy country and consequently considerably less risk.

'Go along this road from A to B,' might be his typical instructions. 'Do not linger at the cross roads at B because you are certain to be shot at by 'flak'. Turn left over that forest and in particular have a look at the western edge of it. We have a strong suspicion that enemy tanks are in harbour there. When you have done this go along the river to X. Look at the bridge there, and let me know if it is standing. Then come back over the village of Y, keeping a sharp lookout for enemy motor cyclists or armoured cars. I am not quite sure how far they have got along that road.'

'Briefing a Lysander Crew'. The pilots are just off on a reconnaissance. The A.I.L.O. explains the purpose of the flight, the area to be reconnoitred, and what is to be looked for.



The interrogation

These bald statements can be trebled and quadrupled in value if the A.I.L.O. (Air Intelligence Liaison Officer) and the pilot take on the subsequent interrogation in the right way. The pilot can tell the A.I.L.O. of all the little suspicions which he has formed during his reconnaissance. 'There seemed to be a lot of smoke coming from that wood.' (Was it an indication that some troops were hiding in there and were, probably against all orders, cooking themselves a hot meal?) 'I saw a lot of tracks in that square there, but I could not recognize them.' (Does that mean that there are some tanks hiding in the village?) 'I'm sorry, old boy, but I was being shot up badly just there, and I got my map reference wrong. This is the correct one.' The weather was absolutely foul over this part of the area and as I had seen a formation of Messerschmitts which was probably looking for me, I used cloud cover a good deal, so I am afraid my information is a bit scarce.' (The A.I.L.O. makes a mental note to tell the next pilot up that he must try and remedy that gap.)

Those are typical remarks made by pilots to the A.I.L.O. who in questioning him extracts the maximum amount of information. Many of the most efficient pilots are men of few words and require a kind of sympathetic cross-examination lest they unconsciously fail to reveal a point from which important deductions can be made.

What is required of aircraft for the work

that has been described? For strategic reconnaissance it is very similar to that for bombing. Extra petrol is carried instead of bombs, and endurance, self-protection and navigational qualities that are required for this type of work are rendered available.

Just as adapted bombers are suitable for one kind of work, so what are virtually adapted fighters are suitable for other kinds. If the numerous guns and their ammunition were removed from a fighter and a camera or two and extra petrol carried instead, an ideal aircraft for really high flying swift reconnaissance would result.

One single machine of this type flying at a great height is extremely difficult to see, and the pilot has a good chance of doing his job without unpleasant attentions from enemy fighters. Navigation may be a difficulty and must necessarily be of a fairly elementary type, but finding one's way at enormous altitudes on a clear day is a different matter to humdrum flying at a height of a few thousand feet. The pilot is being apart; he looks over one side of his aircraft and can, for example, see the bulge of the Kentish shore with the Downs stretching away beyond. Turning his head he can see a small diamond shaped piece of land in a blue setting. It is the Isle of Wight. The smudge like a grimy thumb print just ahead of him is London. If he cares to put his nose down a trifle he can work up a speed of 600 miles per hour, so a few miles more or less makes very little difference in the long run.



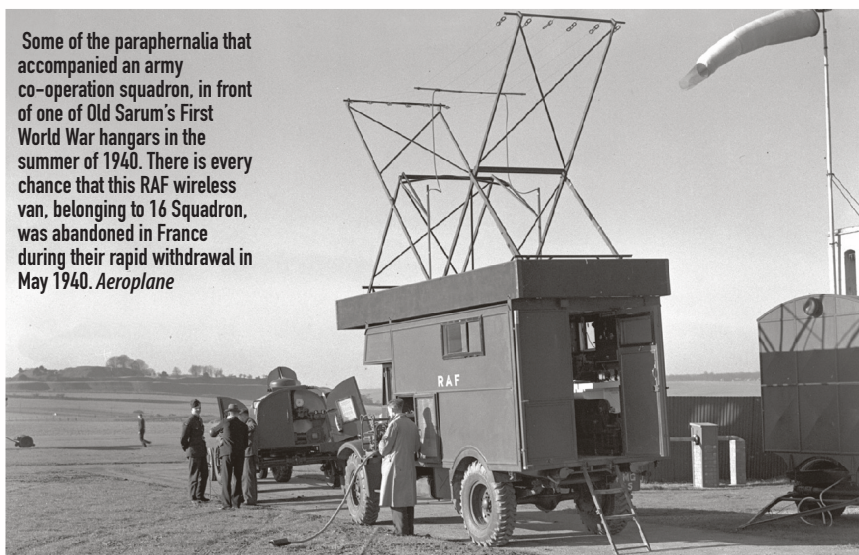
Pilot and Observer

The principle adopted by the RAF is that the only man in the crew of an aircraft who can carry out really successful detailed reconnaissance of the ground below is the pilot. This is different from the ideas held in many other countries, but there is little doubt that the pilot's ability to put his aircraft into any position at a moment's notice is of supreme value.

Concealment on the ground is betrayed in most unexpected ways. Glinting sunshine on minute pieces of metal equipment such as brass buckles on a man's pack, or the momentary splutter of a match at dawn, may more than hint that a particular area should be visually tooth-combed.

What happens if it is the observer's, not the pilot's suspicions which are aroused? However urgent his efforts, invaluable time must be lost before he can convey to the pilot his intricate requirements, and the aeroplane has been thrown about to a favourable position for a better view. On the other hand, the actual flying of an aeroplane at height need claim but little of the pilot's attention, occasional glances at an instrument or two will suffice. Not only out of respect for poetic justice, but also for reasons of downright expediency, he it is who should be monarch of all he surveys.

Some of the paraphernalia that accompanied an army co-operation squadron, in front of one of Old Sarum's First World War hangars in the summer of 1940. There is every chance that this RAF wireless van, belonging to 16 Squadron, was abandoned in France during their rapid withdrawal in May 1940. *Aeroplane*



The second man in a two-seater is not an observer in the old fashioned sense of the term at all. His job from the rear seat is solely to look out for enemy aircraft and machine gun them should they attack. If all is quiet, however, the gunner can help the pilot considerably; as in every other type of flying it is good teamwork that counts for efficiency.

Co-operation aircraft

It has been suggested that Army Co-operation squadrons should follow the practice adopted for reconnaissance over the sea, and employ three-seater aircraft, the crew of which consists of pilot, air gunner and observer. Over the sea, however, there may be no landmarks to help guide the pilot home, and 'home', moreover, may be an ➤



In a career that mirrored that of the Lysander, the Henschel HS 126 entered Luftwaffe service in 1937 in the same reconnaissance and observation role as its British counterpart. As a result both aircraft had distinct similarities which were more apparent when both were airborne. *Via Martyn Chorlton*

aircraft-carrier surrounded by a vast expanse of inhospitable ocean. In addition, 'home' may well be moving in any direction at speed, for which the navigator of the aircraft must account. He has, in fact, a fun-time job peculiar to maritime requirements. On land there is always a friendly railway or other well-known feature to guide the pilot home.

Ideal flying characteristics of Army Co-operation aircraft would combine good qualities of fighters, bombers and light aeroplanes. A balanced compromise is the result. There must be a good down-ward field of vision for the pilot, and sufficient armament to discourage enemy fighters. Speed must obviously be sacrificed from the observation point of view alone—one cannot have a pilot perpetually having to say to himself 'that is tanks—that was.'

Westland Lysander

The Westland Lysander two-seater aircraft, a high-wing monoplane of distinctive design, probably well known to most people, was designed as this compromise. This machine has a wing span of 50ft, and is 30ft 6ins long. Its top speed with the 905hp Bristol Perseus sleeve-valve air-cooled radial engines is 230mph at 10,000ft, yet it can fly fully loaded as slowly as 55 mph.

In designing a machine for carrying out identical duties the Germans arrived at a very similar result, namely the Henschel 126. This machine has a wing span of 47ft 7ins and is 37ft 7ins long.

So far, finding the enemy has been the aspect of Army Co-operation mainly discussed. In many cases the logical outcome is to set about hitting him, and for this purpose an air offensive is one of the first means to suggest itself. What is of tremendous importance is that the effective punch should follow with the least possible delay, and be vitally aimed. For example, an infantry attack has been launched against the enemy. Excellent progress has been made, quite according to plan, except that in one awkward sector of the line the enemy has put up unexpectedly stubborn resistance. Our troops have outrun the artillery, and unless something pretty drastic is done about it the advance will not be the magnificent success of its early promise. The military commander, however, can now call upon the bombers, and the bombers may well convert what would have been a merely average success into something approaching a rout. Such action primarily, of course, depends on the ability to get pilots into the air and over the target with minimum delay. As in every other form of organization adequate communications are essential.

Fighters, too, can be of great assistance to the Army. Their main job, of course, is to conduct a ceaseless battle for air superiority—a battle which, if waged successfully, spells comparative immunity from attack for our reconnaissance aircraft, freedom for bombers to select their targets and bomb them at their leisure and, perhaps most important of all from the military commander's point of view, freedom from being watched over by enemy reconnaissance aircraft. That is the job which Hurricanes and Spitfires, and Britain's later fighters such as the Typhoons and Tornados are immensely capable of carrying out.

As relief from this arduous battle for air superiority, fighters can greatly assist the Army by such exploits as machine gunning enemy columns and providing close escort for reconnaissance and bomber aircraft sent on particularly important missions. It is recognized, however, that activities which involve, strictly speaking, the misemployment of fighters are to be discouraged, but who would let slip such advantages as when there is the opportunity of transforming an orderly and disciplined strategic retreat into a more or less chaotic rout by a panic-stricken rabble? ❖



A show of force by a group of army co-operation Lysanders, purely for the benefit of the press from a Wiltshire airfield before beginning of the Second World War. The stark reality of war and the pace of the Battle of France rendered the type obsolete overnight for its intended role. *Aeroplane*



A line of 2 Squadron Lysander Mk Is at Hawkinge in late 1938 loaded with Mk VB parachute supply droppers under their stub wings. The RAF's pioneering army co-operation squadron first received the Lysander in July 1938 and retained the type until July 1942 although long before, the Tomahawk and Mustang were already on strength. *Aeroplane*







TOWING THE LINE!

Alastair Goodrum tells the story of the Lysander in one of its many important secondary roles as a target tug

Multi-variant target tug

During the Second World War Westland's Lysander saw service in a variety of guises, most of which - because of its performance limitations - ironically brought it into close contact with danger. Of these dangers, none could be more alarming for the crew than towing a target for some hot-shot fighter pilot to attempt to shoot it full of holes.

Although precise numbers are difficult to verify, it seems likely that almost 50% of the total Lysander production of 1,650 (including those built in Canada) ended up as Target Towing (TT) versions somewhere in the world. These included conversions of the relevant

standard marks to TT Mk I, TT Mk II and TT Mk III; but the major variant was the TT Mk IIIA, of which 123 examples were conversions from the Mk III with further batches, amounting to 117 Lysanders, built from the outset as TT Mk IIIAs - as were almost all of the 225 examples built in Canada. In general, the Lysander TT versions saw service between 1942 and 1944 as far afield as Canada, Great Britain and India until, in their turn, they were replaced by towing aircraft that were more in tune with the faster speeds of operational fighter aircraft. Lifting the lid on the wartime Central Gunnery School (CGS) provides us with a brief insight into the Lysander's target towing role.

The Central Gunnery School

On April 1, 1942 CGS moved in to Sutton Bridge and inherited four Lysander Target Tugs from the previous occupant; 56 Operational Training Unit (OTU), a Hawker Hurricane OTU that also used target towing aircraft. Prior to April 1942 this facility was provided variously by Fairey Battle TT, Hawker Henley and Westland Lysanders of 1489 Target Towing Flight, formerly known as Sutton Bridge Station Flight, which was kept very busy by the Hurricane OTU 'tyros' and aircraft from operational fighter squadrons visiting the Holbeach Marsh Range for air gunnery practice. Sutton Bridge Station Flight had

Lysander TT Mk III, R9003, of 7 AGS (Air Gunnery School) towing a drogue off Porthcawl, as viewed from one of the unit's many Avro Ansons. *Aeroplane*



been re-designated 1489 Flight during September 1941 but when CGS arrived in April 1942 a cadre of 1489 Flight moved out to RAF Matlaske, leaving behind four Lysanders with which CGS began to operate its own integral Target Towing Flight. This number was rapidly increased to around ten aircraft, nine of which have been positively identified: T1429, T1444, T1459, T1618, all Mark III conversions to TT Mk III; V9496, a Mk IIIA converted to TT Mk IIIA; V9813, V9822, V9901 and W6955, built as TT Mk IIIAs. The CGS Chief Instructor complained to his superiors that the ideal establishment ought to have been closer to 18 but this was never achieved while at Sutton Bridge.

“...tell ‘em I’m pulling it, not pushing it!”

The Lysander was a responsive and manoeuvrable aircraft with an ample ‘girth’ in the rear cockpit area that made it ideal for a winch. The IIIA was modified for Target Towing by mounting an electrically cranked, three-drum winch between the pilot and observer positions in a way that still allowed space beneath the rear canopy for an operator to manipulate access doors, the winch, cable and targets. The winch drums contained enough wire cable to allow a target to be streamed out to about 1,000 to 1,200ft astern of the tug. Running the risk of lacerations or

worse, winch operators were forbidden to handle the cable unless they wore heavy duty protective gloves. A pair of doors was built into the floor of the observer area to allow the cable and targets to be let in and out while in the air. The doors could be lifted and opened inwards prior to streaming the cable. Just outside and slightly forward of the doors was a bracket with a reel, through which the tow cable was made to turn through 90° to clear the floor aperture and the tail wheel. Further protective wires were secured around the fin, rudder and tailplane assembly to prevent the towing cable from interfering with the rear control surfaces.

The penultimate Lysander TT Mk IIIA to leave the Westland production line was V9905 seen at Yeovil in December 1941. Just visible are the black and yellow undersides, the towing cable guide to the rear of the undercarriage and the towing gear and winch mounted above the fuel tank between the pilot and observer. *Via Martyn Chorlton*



The aircraft itself was usually painted in the prevailing camouflage pattern on upper surfaces but in its towing role it was embellished with garish but highly visible, three-feet wide black stripes, painted at a 60° angle at six-foot intervals over a 'trainer' yellow on the under-surface of the wings. Some aircraft are known to have had a broad yellow band around the wheel spats and rear fuselage. Such visible markings, however, still did not prevent some of the TT 'Lizzies' being 'shot up' from time to time and winch operators - usually ground crew airmen with no aircrew 'brevet' - certainly earned their one shilling and sixpence (£2.97 in 2012) a day flying pay (danger money?). There is an apocryphal story going the rounds to the effect that on one such hairy occasion an unknown pilot yelled at his winch operator to "tell 'em I'm pulling it, not pushing it!"

Red, blue and green

At CGS all the air firing sorties were carefully briefed and closely controlled by air-to-air and air-to-ground radio and the Chief Instructor was in direct contact with the Range by land-line telephone. Fighter pilot students from the Pilot Gunnery Instructor Wing performed their 'live' shooting at towed drogues out over The Wash and its marshes. A 'sleeve' drogue was most commonly used since its 'wind-sock' shape, inflated as air passed rapidly and constantly through it, gave the impression of a 'fuselage' as a fighter came in to attack. A Lysander could carry three or four of these target drogues - made from canvas, measuring 20ft in length, 4ft in diameter at the mouth and tapering to 2ft at

the tail. The 'mouth' was kept open by a substantial piece of wood across the diameter and a pear-shaped lead weight of about 5lbs was secured to the lower edge of the mouth to help keep the drogue stable in flight. Usually three fighter students would shoot at one drogue on each gunnery sortie. The 'ball' heads of the ammunition loaded into their Spitfires was dipped in a non-drying paint, with a different colour for each student - usually red, green or blue. When the drogue was examined after a firing exercise, the coloured edges of any shot holes in the drogue identified which student had fired the shots.

Every 'shoot' by each student was carefully recorded and results were plotted in tabular and graph form, so that instructors and students could see how performance fluctuated and generally speaking - under the intensive and strict training regime - they all showed steady improvement. It was said that it was quite usual to find some students arriving at CGS with something of a reputation as a 'hot shot' but few of them shone in their first few encounters with a target drogue.

CGS scoring methods during 1943 were as follows. A drogue was divided into three sections, although this was purely notional since no delineation was marked on the actual target itself. Hits on part 'A', closest to the 'mouth' where the cable was attached - about one sixth of the total length - counted highest because this section represented the most vulnerable components of an enemy aircraft: pilot, engine and fuel tanks for example. The remainder of the drogue was divided into two equal parts 'B' and 'C'. There

were two sets of points that could be awarded depending on the type of exercise being flown. Against 'bombers', one point was given for hits in 'A' and half a point for hits in 'B' and 'C'. Against 'fighters', 'A' and 'B' were regarded as the vulnerable forward area and hits in those areas counted for three points, while hits in area 'C' counted as half a point.

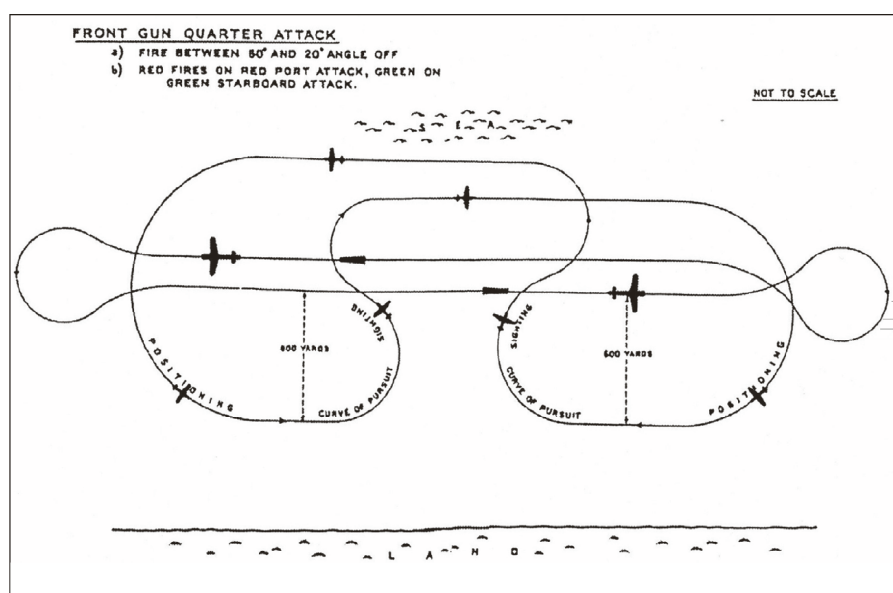
Since judgment of size and distance in the air was always the tricky issue for fighter pilots, in order to prepare students for the way a real drogue would look at the correct firing distance in the air, a 1/12th scale model was set up on the ground. They could practice ranging this through a standard reflector sight as fitted to current fighters.

Streaming out

While CGS was at Sutton Bridge, the bleak Holbeach Marsh Range continued to provide the air space and ground targets for air-to-air, air-to-ground and low-level strafing practice. During most of their working days Lysanders were detached to the Holbeach Range landing ground and were flown to and from there at the beginning and end of the working day. This landing ground was a small grass field at the end of Durham's Road, adjacent to the Range Administration and Domestic site that was tucked up against the landward side of the sea bank at Gedney Dawsmere and from which it took no time at all to fly onto station to begin a towing sortie over the Range. Targets were also marked here and results telephoned back to Sutton Bridge so that they were available almost as soon as the students had landed. In order to maximize air time productivity of the target tugs and thereby



Originally built as a Mk III this Lysander, T1444, was converted to TT Mk III standard before it entered RAF service. The aircraft went on to only serve with 5 AOS (Air Observers School) based at Jurby on the Isle of Man where the aircraft is flying just off the coast. *Via author*



◀ A diagram from instructional material used in the Pilot Gunnery Instructor course at CGS while located at Sutton Bridge. The 'Land' represents the bank at Gedney Drove End and the 'Sea', in this case, would be The Wash. During this quarter attack exercise, towing aircraft travel parallel to the land and attacking fighters fire out to sea. *Via author*

increase the air firing time available to gunnery students, three or four targets were carried aboard the tug. This meant that when one exercise was completed, the 'used' target could be wound in, disconnected and dropped from the Lysander during a low, slow pass over the landing ground, where it would be marked and repaired, while the airborne winch operator readied the next target for streaming out for another batch of fighters over the range.

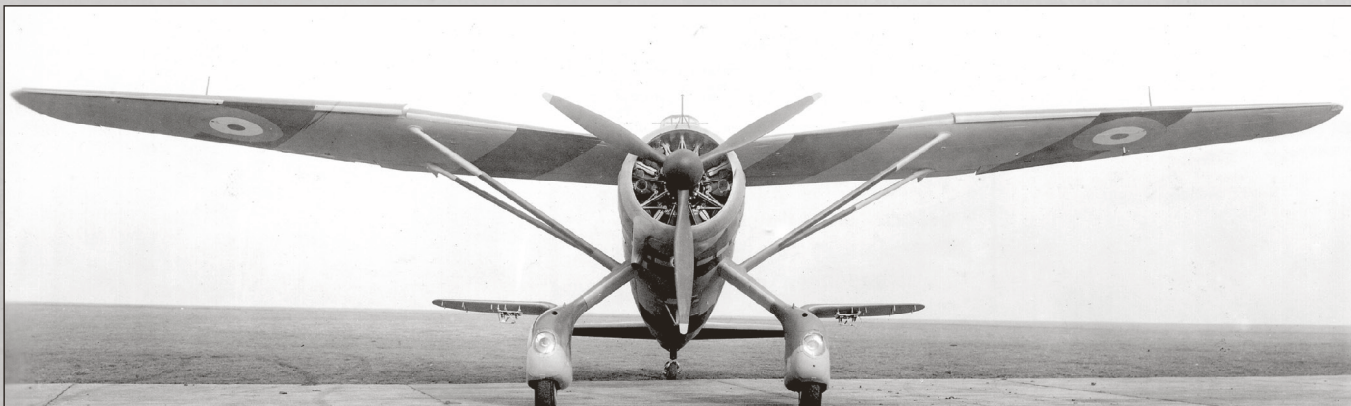
Norman 'Taff' Warren found himself posted to the wilds of CGS Sutton Bridge but he and many of his compatriots were soon moved out of the Station and billeted in the

village. He was not sure whether this was a safety measure as a direct result of the bombing raids or the result of the influx of the WAAF - but he thought it more likely the latter. He had the pleasure of staying with Mrs Sage in Custom House Street, about a half a mile walk from the Camp. Widow of the former railway Station Master, Mrs Sage had Taff and one other airman under her roof and received the sum of six shillings a week (£11 in 2012) from the RAF for doing so. Inevitably the airmen and WAAFs quickly got on good terms and Taff Warren was no exception. He worked as a fitter on 'C' Flight, servicing Lysander target tugs and met his future wife at Sutton

Bridge airfield where she worked as an armourer; the station armoury being located adjacent to 'C' Flight dispersal. Taff also recalled flying down to the Range landing strip in the mornings, performing minor servicing on the Lysanders between towing duties, then flying back to Sutton Bridge when the day's towing was over. During her time at CGS Bomber Wing in 1942/3, Cpl (W) Olive Moule remembered "seeing a Lysander parked in a special corner of the perimeter track, which always had an air of mystery about it and we wondered if it was one of those that flew over to Holland or France at night."

Slicing the cable

Records indicate that about 3% of targets were shot away from their towing cable, which of course meant that an exercise had to be aborted so that the Tug could recover what was left of the cable and return to base for appropriate repairs. On March 3, 1943 for example, Flt Lt Lance Burra-Robinson, a flying instructor from 41 OTU at Hawarden who was on detachment to CGS as a gunnery student, had a nasty surprise while firing over the Range in Mustang Mk I, AP170. Firing at a drogue his rounds sliced it from the towing cable and the Mustang flew into the



Another view of TT Mk IIIA, V9905 which went on to serve with 58 OTU based at Grangemouth and would most likely have been seen at the unit's satellite at Balado Bridge. The aircraft gave faultless service until it was SOC on January 25, 1944. *Via Martyn Chorlton*

wallowing canvas tube - weights and all - damaging one wing of the aircraft. He landed safely at Sutton Bridge and clearly learned something from his CGS experiences since he finished the war as a squadron leader with a DFC and five kills to his name.

There was a narrow squeak for the youngsters of Dawsmere Primary School on July 5, 1942 too. Returning from a target-towing sortie in Lysander TT Mk III, T1618, staff pilot Sgt W M L Penny narrowly missed hitting the school when he had to force land

due to running out of petrol. This was followed on 17th by Lysander TT Mk IIIA, V9496, making a rough landing at Sutton Bridge, causing the normally resilient undercarriage to fold and the 'Lizzie' to collapse in a heap, but the crew escaped with just cuts and bruises.

Incidents and accidents

The Range landing ground at Gedney Dawsmere was a 'pocket-handkerchief' affair and though this would normally present no great difficulty for a Lysander that could land on a sixpence there were, nevertheless, a number of mishaps mostly caused by the tight landing area. On May 11, 1943 Flt Sgt W S Johnson was doing a circuit just after take-off in TT Mk IIIA, W6955, when there was

a bang and his cockpit began to fill with acrid smoke. The engine had suffered a big end failure and he only just squeezed into the landing ground after the engine seized up. Sgt A George overshot during a landing on April 15 and he ran into a dyke. Flt Lt A R Dunn did a similar trick on June 9 and ran his TT Mk IIIA, V9901, into the sea bank. On July 26 TT Mk III, T1459, flown by Flt Sgt R P Wilson suffered a tail wheel oleo collapse on landing but he was uninjured. Sgt H Mantell, though, was not quite so lucky on September 23. His Lysander TT Mk IIIA suffered engine failure at 800ft during a live firing sortie and he could not make it back to the Range landing strip. Just managing to hop over the sea bank he set it down in a potato field where it ran into a farm plough before coming to rest upside



Having served with 110 Squadron, RCAF as a MK III, R9003 was converted into a target tug to serve with 2 AOS and 7 AGS. *Via Martyn Chorlton*



First formed at Driffield, North Yorkshire to serve 4 Group bomber units, 1484 (TT) Flight was equipped with up to a dozen Lysanders between late 1941 and early 1943. *Via Martyn Chorlton*



Built from new as a target tug TT Mk IIIA, V9817, saw RAF service with 4 Gp AACF and 210TU before being transferred to the USAAF's 2025 Gunnery Flight on March 10, 1943. *Via Martyn Chorlton*

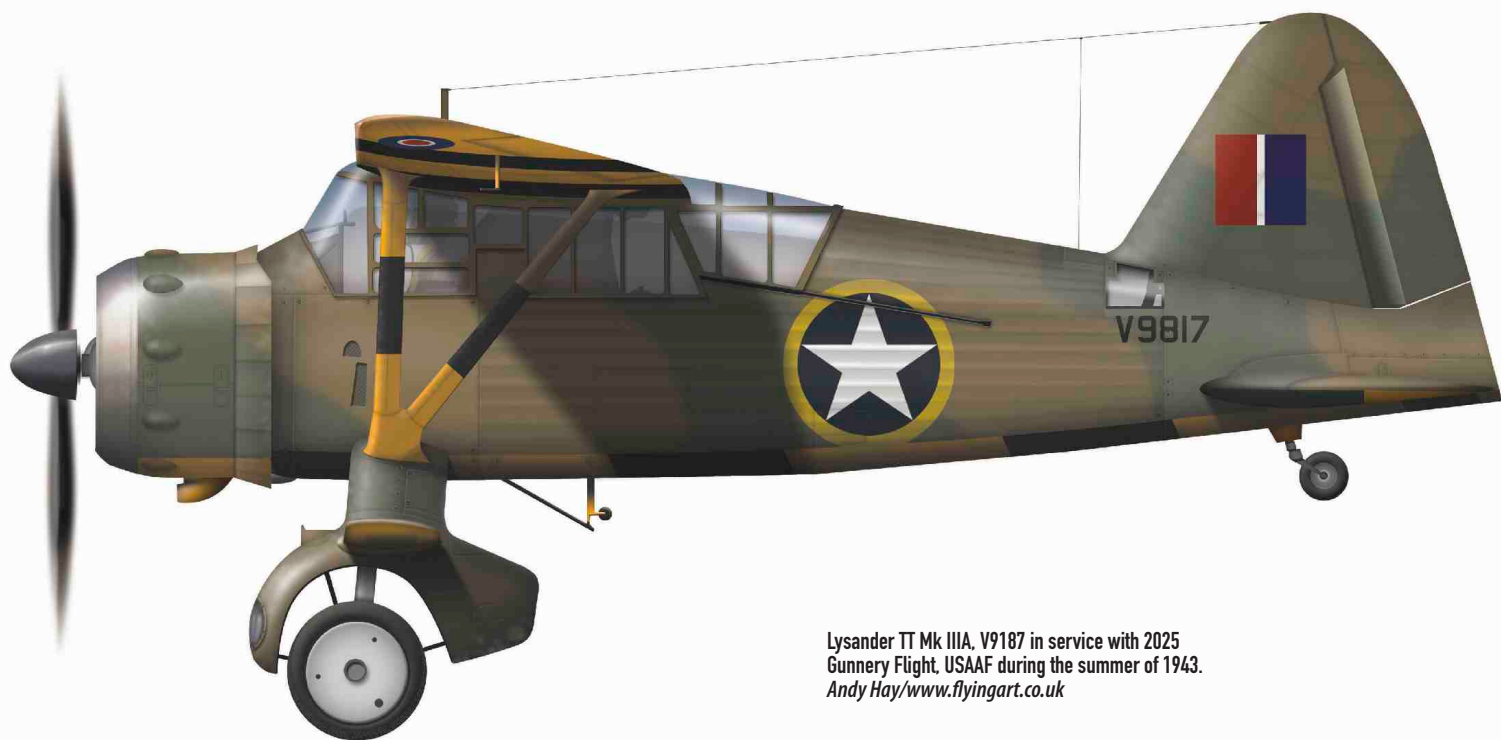
down in a dyke. He was slightly injured. Fenland dykes were one of the most effective 'stoppers', as Sgt T J Fogg found out when he overshot the Range landing ground in TT Mk IIIA, W6955 on a cold December day in 1943.

It was quite normal to see over The Wash the occasional Lysander from units other than CGS and the worst incident involving a TT Lysander actually occurred not to a CGS aeroplane but to one from 3 OTU based at RAF Cranwell. The origins of this particular incident on January 21, 1943 were back at RAF Digby, where 411 (Canadian) Squadron operated Spitfire VB fighters. That morning

seven Spitfires from 'B' Flight were airborne at 1010hrs for a Flight formation exercise, which was to be followed by test firing the cannon on each aircraft. The formation crossed the coast at Skegness and the Flight Commander gave the order for each pilot to break away, with a wing-man accompanying him, according to a pre-arranged plan. That plan required each pilot in turn to dive towards the sea and fire his cannon into the water then climb to re-join the formation. Meanwhile, Lysander TT Mk IIIA, V9797 from 3 OTU, flown by WO William Atkins with an unidentified winch operator in the back, was trundling

over Wainfleet Range in The Wash, towing a target in the designated area. The Lizzie was hit by Spitfire AA754 flown by WO John McMillan RCAF who was accompanying another Spitfire on its way down. Disintegrating as they fell, the Lysander and Spitfire plunged into The Wash two miles south of Skegness and about 100 yards offshore. The Canadian formation circled the area until an ASR boat reached the scene but no survivors were found. Two bodies, those of Atkins and McMillan, were later recovered from the sea by Skegness lifeboat but the winch operator was never found. ❖





Lysander TT Mk IIIA, V9187 in service with 2025
Gunnery Flight, USAAF during the summer of 1943.
Andy Hay/www.flyingart.co.uk

SPECIALIST RAF LYSANDER TT UNITS

1 Gp (TT) Flt; Formed Sep 18, 1941 at Goxhill with 9+3* Lysander; to Binbrook Nov 10, 1941; Redesignated 1481 (TT) Flt Nov 14, 1941.

2 Gp (TT) Flt; Reformed Sep 30, 1941 at West Raynham with 6+2 Lysander TT; Redesignated 1482 TT Flt.

3 Gp (TT) Flt; Formed at Marham on Feb 14, 1940 from a 98 Squadron detachment that had been operated a TT service using Battles from Mildenhall, Catfoss and Waddington since October 1939; Not clear when Lysanders complimented Battles in the role; Redesignated as 1483 TTF on Nov 18, 1941.

4 Gp (TT) Flt; Formed at Driffield on Feb 1940 from Linton-on-Ouse Station Flight which had been operating 2+1 Battles towing targets for 4 Gp Whitley squadrons; Again unclear when Lysanders complimented Battles; Operated from Cottam between Sep 29 and Oct 24, 1940 following very heavy raid on Driffield; Amalgamated with 5 Gp TTF at Driffield until Apr 2, 1941 with 13+2 Battle (no mention of Lysander); Cottam again from May 12, 1941 to Sep 28, 1941; Redesignated 1484 TTF on Nov 14, 1941.

5 Gp (TT) Flt; From October 1939 at Finningley, to provide towed targets for 5 Gp Hampden squadrons using 2+1 Battle; TT detachment maintained at Catfoss and later Waddington; 5 Gp TTF formed Feb 14, 1940 at Driffield but amalgamated with 4 Gp TTF on Apr 2, 1941 with 13+32 Battle; To Coningsby Apr 2, 1941; detached to Scampton Aug 19, to October 2, 1941; Disbanded into 1485 TTF on Nov 14, 1941.

6 Gp (TT) Flt; Formed at Abingdon on December 27, 1939 to tow targets for 6 Gp

squadrons; From Mar 6, 1940 tasking taken over by Bicester Station Flight; Arrangement ended wef Feb 1941 when OTUs took over.

9 Gp (TT) Flt; Formed at Valley on Jul 16, 1941 with an establishment of 3+1 Lysander; Redesignated as 1486 TTF on Dec 8, 1941.

10 Gp (TT) Flt; Formed at Warmwell on Jul 16, 1941 with 6 Lysander; To Filton Oct 1941; To Warmwell Nov 1941; Redesignated as 1487 TTF on Dec 8, 1941.

11 Gp (TT) Flt; Formed at Shoreham on Jul 16, 1941 with an establishment of 7+3 Lysander; To Ford Oct 1941; To Shoreham October 25, 1941; Redesignated 1488 TTF on Dec 8, 1941.

12 Gp (TT) Flt; Formed at Coltishall on Jul 16, 1941 with an establishment of 4+2 Lysander; To Sutton Bridge on Oct 2, 1941; To Matlask on Apr 13, 1942; Redesignated 1489 TTF on Dec 8, 1941.

13 Gp (TT) Flt; Formed at Acklington on Jul 16, 1941 with establishment of 4+1 Lysander; Redesignated 1490 TTF on Dec 8, 1941.

14 Gp (TT) Flt; Formed at Inverness/Longman in Oct 1941 with an establishment of 4+1 Lysander; Redesignated 1491 TTF on Dec 8, 1941.

82 Gp (TT) Flt; Formed at Ballyhalbert on Nov 2, 1941 with 2+1 Lysander TT; Redesignated 1480 TTF on Nov 24, 1941.

1481 (TT) Flt; Formed Nov 14, 1941 (ex No.1 Gp TTF) at Binbrook with twelve Lysander for gunnery co-operation with 1 Group units; Redesignated as 1481 Target Towing & Gunnery Flight (TTGF) in Jan 1942; Lysanders replaced by Martinets in Feb 1943.

1482 (TT) Flt; Formed Nov 1941 from 2 Gp TTF at West Raynham, initially with 6+2 Lysander and four Blenheim for gunnery

co-operation with 2 Group units; Redesignated 1482 TTGF Jan 1942; Renamed 1482 (Bomber) Gunnery Flight on May 2, 1942; Lysander replaced by Martinet from Jan 1943 onwards.

1483 (TT) Flt; Formed Nov 18, 1941 from 3 Gp TTF at Newmarket, initially with Lysanders and Wellingtons to provide air gunner refresher training for 3 Gp units; Redesignated as 1483 TTGF with 9+3 Lysander on Feb 7, 1942; Became 1483 (Bomber) Gunnery Flight in Jul 1942; From Jul 1943 Lysanders replaced with Martinets.

1484 (TT) Flt; Formed Nov 14, 1941 from 4 Gp TTF at Driffield, initially with Lysanders and Battles to provide air gunner refresher training for 4 Gp units; Redesignated 1484 TTGF with 9+3 Lysanders; Became 1484 (Bomber) Gunnery Flight in May 1942; Lysander not mentioned in establishment for Feb 1943.

1485 (TT) Flt; Formed Oct 30, 1941 at Coningsby with 9+3 Lysander to provide air gunner refresher training for 5 Gp units; Jan 7, 1942 absorbed 5 Gp TTF and redesignated

1485 TTGF; Apr 1942 establishment 8 Whitley and 9+3 Lysander; Became 1485 (Bomber) Gunnery Flight; Target towing detachment at Coningsby from Aug 1, 1942 to Mar 8, 1943; To Fulbeck October 27, 1942; Became 1485 (Bombing) Gunnery Flight; Feb 1943 establishment still included four Lysander; Martinet by Aug 1943.

1486 (TT) Flt; Formed Oct 30, 1941 from 9 Gp TTF at Valley, initially with 3+1 Lysander to provide gunnery refresher training for 9 Gp units; Apr 22, 1942 became 1486 (Fighter) Gunnery Flight; Oct 7, 1942 establishment included 4 Lysander; To Llanbedr Jul 8, 1943; Disbanded into 12 APC on Oct 18, 1943.



Lysander TT Mk III, T1444 during its service with 5 AOS, stationed at Jurby on the Isle of Man. The aircraft was lost on March 26, 1943 when it flew into a high ground near Laxey. *Andy Hay/www.flyingart.co.uk*

1487 (TT) Flt; Formed Oct 30, 1941 from 10 Gp TTF at Warmwell, initially with 4+2 Lysander to provide air gunnery refresher training to 10 Gp units (dets to Portreath Jan 1942 to Jun 42, Fairwood Common from Apr 4, 1942 to Sep 13, 1943, Exeter from October 2, 1942 to Aug 1943 and Colerne from Mar 1, 1943 to Jul 31, 1943); Became 1487 (Fighter) Gunnery Flight Apr 22, 1942; Jul 1942 carried out target towing for USAAF P-38 units; Oct 7, 1942 establishment included 7+2 Lysander; To Fairwood Common Sep 13, 1943; Disbanded into 11 APC on Oct 18, 1943.

1488 (TT) Flt; Formed Dec 1, 1941 from 11 Gp TTF at Shoreham, initially with 7+3 Lysander to provide air gunnery refresher training for 11 Gp units; To Rochford Feb 9, 1943; Mar 3, 1942 Lysanders increased to 12+2; Apr 29, 1942 No.1 Flight to Shoreham and No.2 Flight to Rochford; Apr 22, 1942 became 1488 (Fighter) Gunnery Flight; Jun 7, 1942 to Martlesham Heath (dets to Ipswich Oct 7, 1942 and Ford from Feb 1, 1943); Aug 17, 1943 to Southend; Disbanded into 17 APC on Oct 18, 1943 by which time Lysanders may have been full replaced by Martinets.

1489 (TT) Flt; Formed Dec 8, 1941 from 12 Gp TTF at Coltishall, initially with 4+2 Lysanders and Henleys to provide air gunnery refresher training for 12 Gp units; Apr 22, 1942 became 1489 (Fighter) Gunnery Flight (dets to East Fortune from Sep 13, 1942, High Ercall Dec 1942 to Jun 1943, Kirton-in-Lindsey from Dec 1942 to Apr 1943 and Ludham from Dec 1942 to 1943); Mar 30, 1942 7+2 Lysanders on strength; To Matlask Apr 13, 1942; Jun 2, 1943 to Hutton Cranswick to operate in conjunction with 1495 Flight (det Catterick from Jul 1943); Disbanded into 16 APC on Oct 18, 1943.

1490 (TT) Flt; Formed Dec 8, 1941 from 13 Gp TTF at Acklington with 4+1 Lysanders and Henleys to provide air gunnery refresher training for 13 Gp units; Apr 22, 1942 became 1490 (Fighter) Gunnery Flight; 1942 re-equipped with Masters and Martinets although 7 Lysanders were still on strength in Feb 1943.

1491 (TT) Flt; Formed Dec 8, 1942 from 14 Gp TTF at Inverness, initially with 3+1 Lysander to provide air gunnery refresher training for 14 Gp units; To Tain Dec 26, 1941; Apr 22, 1942 became 1490 (Fighter) Gunnery Flight; To Skaeabrae Nov 15, 1942; To Castletown Aug 16, 1943; To Peterhead Oct 1943 with 5+2 Lysander on strength; Disbanded into 15 APC Oct 18, 1943.

1492 (TT) Flt; Formed Oct 18, 1941 in 70 Gp at Weston Zoyland, initially with 4+1 Lysander to assist in the operation of Lilstock firing range; Apr 22, 1942 became 1492 (Fighter) Gunnery Flight; Master and Martinet progressively added through 1942 and no Lysander on strength by early 1943.

1493 (TT) Flt; Formed Oct 31, 1941 ex 83 Gp TTF at Ballyhalbert, initially with 2+1 Lysander TT to provide air gunnery refresher training for 82 Gp units; to Newtownards Jan 6, 1942 (dets Eglinton Mar 1942 to Aug 23, 1942, Ballyhalbert Apr 6, 1942 to Jan 26, 1943 and Kirkistown Apr 6, 1942 to Nov 1942); Apr 22, 1942 became 1493 (Fighter) Gunnery Flight; To Ballyhalbert Jan 26, 1943; To Eastchurch Apr 14, 1943 as a lodger with 54 Gp (det Westhampnett Jun 9, 1943 to Jul 1, 1943); To Detling Jul 26, 1943 and 11 Gp control; To Gravesend Oct 7, 1943; Disbanded into 18 APC on Oct 18, 1943.

1494 (TT) Flt; Formed Dec 18, 1941 at Long Kesh, initially with Lysanders to provide air gunnery refresher training for RAF Northern

Ireland units; To Sydenham Apr 13, 1942; To Ballyhalbert Apr 16, 1943; To North Weald Mar 5, 1945; Masters only added in May 1945; Disbanded Jun 30, 1945.

1495 (TT) Flt; Formed Aug 8, 1942 at Sawbridgeworth (34 Wing) with 3+1 Lysander to provide TT facilities for the air-to-ground range at Mersea Island; To Hutton Cranswick Jul 10, 1943 and 12 Gp control; Disbanded into 16 APC on Nov 14, 1943.

1496 (TT) Flt; Was to form on Nov 11, 1942 at Hawarden with 4+2 Lysander but 41 and 42 OTUs received 3+1 Lysander each instead.

1497 (TT) Flt; Formed Mar 8, 1943 at Macmerry (33 Wing) with 3+1 Lysander to provide air gunnery refresher training for local units; To Ayr Jun 22, 1943; To Shoreham Jul 3, 1943 under 11 Gp control; Disbanded into 17 APC on Oct 18, 1943.

1498 (TT) Flt; Formed Mar 8, 1943 at Hurn (38 Wing) with 3+1 Lysander to provide air gunnery refresher training for 10 Gp units; To Colerne Aug 14, 1943; To Fairwood Common Sep 12, 1943; Disbanded Oct 18, 1943 into 11 APC.

1500 (TT) Flt; Formed May 4, 1943 at North Front to provide target facilities for RAF units based at Gibraltar, initially equipped with Lysanders but these were replaced by Martinets by Mar 1944.

The following, which were not solely target towing units, also employed the Lysander for this duty

1, 2, 3, 4, 7, 8, 9, 10 and 13 AGS; 1 AGS (India); 1, 2, 4, 5 and 9 AOS; 1, 2, 3, 4, 11 and 16 APC.

*The units establishment is expressed, for example as 9+3; the former number is the initial establishment of the unit and the latter the immediate reserve.

The Lysander was heavily employed across the Commonwealth as a target tug, a role it performed in large numbers from 1941 to 1943 by which time more specialist types such as the Miles Martinet were being brought into service. *Aeroplane*





TAIL IN THE AIR

Sampled from the biography 'The Lives of Ken Wallis – Engineer and Aviator Extraordinaire' by Ian Hancock



Plt Off Ken Wallis (89388) (left) with fellow 268 Squadron pilot, Plt Off 'Tommy' Westlake, and a 268 Squadron Lysander Mk III at Westley in Suffolk during March 1941. Ken Wallis

School of Army Co-operation

After flying training - where he gained 'above average' rating - Ken was posted to No. 1 School of Army Co-operation in December 1940 and flew the Westland Lysander. He recalls with sadness having to attend four funerals of fellow pupils at Old Sarum: two Pilots and two Air Gunners were killed on the Course of twelve Pilots and twelve Air Gunners.

He served very briefly with 268 Squadron at Westley on Army Co-operation duties and anti-invasion patrols around the coast of East Anglia. His Log Book shows that between March 10 and 26, 1941 he undertook 33 flights. He would take-off early in the morning, in darkness, to be on coastal patrol at first light and if an invasion fleet was

spotted he would give first warning to No.2 Corps Headquarters near Newmarket. Ken said that it was always a relief to transmit in Morse 'NMS' ('No Movement Seen') every ten minutes, then to drop the Message Log that had been written up in the message bag at No.2 Corps HQ and head back to Westley for breakfast.

On March 21 he flew Lysander Mk III, 'NM-B', on a photographic mosaic imagery task under A.I.L.O. Demand No. 114 covering all of Norwich in Norfolk. An interesting assignment, very much along the lines of work he would undertake in later life with his autogyros, but the purpose behind the task was not disclosed.

Prior to this, on February 19, 1941 his Log Book records a flight in Lysander Mk II, R2010 over Porton Down on S.C.I. Exercise IA and IB. ('Smoke Curtain Installation' was a

euphemism for practice for poison gas spraying from the air.) The 'Lizzie' was fitted with a large tank between the undercarriage legs and extended aft, much like a long-range tank used in Special Operations but this tank had a horizontal fishtail spray at the rear and was filled with a water/aniseed mixture. The spread of the coloured fluid was recorded on slips of blotting paper spread over the 'target area'.

On February 21 in Lysander Mk I, P1698 he undertook Exercise IIB over the Chemical & Biological Warfare Research Establishment, Porton Down and then, on February 23, the S.C.I. flight was over Bournemouth in Lysander Mk II, P1726.

Much later, on April 21, 1942 when he was nearing the end of his 'tour' of operations with 103 Squadron, Bomber Command, he flew an S.C.I flight for 40 minutes over an area

of north Lincolnshire in Wellington Mk IC, Z8832 and the tank occupied the bomb bay. Ken speculates that if the weapon had been employed for real then mustard gas might have been used. At that time, the crews did not know of the development of the nerve gases Tabun and Sarin by Germany.

Posted north

Ken was sent to serve briefly with 241 Squadron, Army Co-operation, at Inverness in Scotland and made 22 flights between April 5 and May 2. Many were quite long distance down to Barnstaple in Devon with stops en route, rather than in one 'hop' as he would do later in his autogyros. In Lysanders there were no co-pilots and the pilot had to write up his log, navigate, etc., whilst rattling away on the

Morse Key, sending messages back to Corps Headquarters. The odd thing was the lack of communication between the pilot and the Gunner in the rear, owing to there being an armour-plate bulkhead between them. Ken recalls that the pilot could pass a written message such as "3 degrees port on the camera" - the apparatus being in the Gunner's compartment - through a small door in the bulkhead. The Gunner would likely see it as it fell in. Attempting a message the other way would have failed, as it would have fallen behind the pilot's seat.

A "major breakthrough" occurred when a hole was drilled in the bulkhead and a cord passed through it to the pilot's harness at each shoulder - the other end could be pulled by the Gunner to indicate the side

from which an attack was being made if it happened: one pull would indicate an attack on that side and below, two pulls for level, etc. The pilot would respond by a tight turn into the attack - if the aircraft had not already been seriously damaged!

Following short periods on the operational 241 and 268 Army Co-operation squadrons, RAF pilots found themselves "volunteered" for Bomber Command. Some of the Squadron pilots were ex-Army who had transferred and been trained to fly on Army Co-operation work. Thus, they could hardly be expected to "volunteer" for bombers.

Ken Horatio Wallis MBE, DSO, CEng, FRAeS, PhD, RAF retired passed away on September 1, 2013 at the age of 97. ❖

Plt Off Ken Wallis (second from the left) with air gunner Sgt Nuttall (left), Plt Off 'Tommy' Westlake and an unidentified air gunner at Westley in March 1941. Lysander Mk III, T1709 was first delivered to 268 Squadron but was later transferred to the Army Co-operation Command Communications Flight before it was converted to target tug standard. The 'Lizzie' served out its days with 1 AGS at Pembrey until November 13, 1943. Ken Wallis



Westland Lysander Mk III, T1613, of 2 Squadron alongside a Mustang Mk I, also of 2 Squadron, at Sawbridgeworth in May 1942. While the Lysander was designed for the army co-operation role, the Mustang was designed as a fighter but it proved to be particularly adept at the task, the Allison-powered variants excelling in the role. *Aeroplane*





RE-EQUIPPING THE EASTERN TIGER

By 1939 the British had already been making plans to hand over complete control of the northwest frontier patrols to the Indian Air Force. To fulfil this effectively, India would have to be re-equipped with the Westland Lysander. Owen Cooper outlines the Lizzie's service with the Indian Air Force



Originally formed in 1933, 1 Squadron is the oldest IAF flying unit and still exists today (currently flying the Mirage 2000). It re-equipped with Lysanders in 1941 and all were emblazoned with the unit's tiger motif. 'Konkan' is a region on the West India coast. *Via Aeroplane*

Reluctant modernisation

The first Lysander to arrive in India was the second prototype, K6128, which was shipped to Karachi in March 1938 for tropical flight trials. RAF Lysander units such as 20 and 28 Squadron would also see service in India, but in 1939 all eyes were turning to the forthcoming war in Europe. The RAF needed every unit it could muster and to release squadrons, the man-power consuming task of patrolling the northwest frontier was being prepared for transfer to the Indian Air Force (IAF). At this stage of the Second World War, no consideration was given to Japan joining the conflict let alone being on the side of the

Axis powers. Unjustly though many did not think that the IAF, which at the time was operating the Hawker Audax and Hart with no sign of a replacement, was up to the task. Clearly the IAF needed to go through a period of modernization, but once again doubts were expressed that it would not be able to cope with 'modern' aircraft such as the Westland Lysander.

By 1941 the decision was finally made to re-equip 1 (Indian) Squadron, under the command of Sqn Ldr S Mukerjee with the Lysander. 48 Lysanders were allocated and delivered to the RAF depot at Drigh Road which was also the home of the IAF's main

aircraft depot. In August 1941, 1 Squadron was withdrawn from its duties on the northwest frontier to convert onto the Lysander under the guidance of the RAF. By September all units operating along the Frontier were being prepared for service in Europe which forced 1 Squadron to return to Peshawar. One flight had to be left behind to complete its conversion training while the rest of the unit began a 750 mile flight northward with its new aircraft. Very conscious of the fact that it was not deemed ready for its new charges, every effort was made to get all of the Lysanders to Peshawar without incident. This appeared in doubt when one of the

The very first Lysander to land on Indian soil was the second prototype, K6128, here at Miranshah during tropical trials. *Via author*



➤ An IAF Lysander, possibly a 4 Squadron machine, with Indian and RAF ground crew posing for the camera. This was most likely taken at Drigh Road during conversion training. *IWM via author*

machines damaged its undercarriage at Multan en route but ground crew, who were carried in the rear cockpits, effected a good repair and 1 Squadron arrived at Peshawar without further incident.

Official handover

Still on RAF charge the dozen Lysanders of 1 Squadron were officially handed over during a formal ceremony at Peshawar on November 7, 1941 by the Governor of Bombay. The transfer had been made possible because they had been purchased by money donated from the Bombay War Gifts Fund. Without delay the unit's aircraft were heavily involved in a working up period with the Indian Army operating along the Frontier. This region was unforgiving to all military equipment and it was inevitable that 1 Squadron would suffer some early casualties beginning with Lysander Mk II, P1694 on November 13. Whilst landing at Manzai the Lysander hit a boulder which caused the aircraft to cartwheel and end up in a heap of twisted wreckage, luckily without injury to the pilot. Only nine days later a second aircraft was wrecked when it landed tail low at Lahore.

Increased strength

A second IAF unit, 2 (Indian) Squadron which was initially formed with Audaxes, began to



re-equip with the Lysander Mk I and Mk II from November 1941. The long term plan was to raise a total of ten Indian squadrons, the third comprising Harts and Audaxes relinquished by 1 and 2 Squadrons while 4 (Indian) Squadron began to receive the Lysander Mk I and Mk II from February 1942. To encourage international support and help to recruit Indians to join their own air force, it was

decided that 1 (Indian) Squadron, which was now fully equipped with 'modern' Lysanders, should be used to publicise the expansion. Part of this exercise involved several of the unit's Lysanders flying from Peshawar to Calcutta as part of the city's War Weapons Week.

1 (Indian) Squadron left Peshawar on November 29 under the command of Sqdn Ldr



Another staged PR photograph depicting an RAF armorer showing an Indian ground crewman how to load .303in ammunition into a Lysander Mk II. The ammunition chute was integrated into the rear of the main undercarriage fairing. *IWM via author*

Again, RAF and IAF armourers work together setting the fuses of a batch of 250lb General Purpose bombs. *IWM via author*





A very well-travelled Lysander was Mk I, P1694, which first served with 110 Squadron, RCAF then 613 (City of Manchester) Squadron before joining 1 Squadron IAF in late 1941. The aircraft's service in India was short as the Lysander was wrecked at Manzai in November 1941; the unit's first loss. *Andy Hay/www.flyingart.co.uk*

➤ It is very rare for an IAF Lysander to give away its identity, but this machine is Mk II, L4801. Originally issued to 16 Squadron the aircraft went on to serve with 4 (Indian) Squadron and remained in service until October 25, 1944. *IWM via author*

K K Majumbar, Sqn Ldr Mukerjee having been transferred to the Quetta Staff College. During the War Weapons Week, 1 (Indian) Squadron operated from Dum Dum which was the home of 3 Coastal Defence Flight at the time. However, with only a few demonstration flights under their belt, news came through about the Japanese attack on Pearl Harbor, followed on December 9 by the Japanese offensive at Kota Bahru in Malaya and the Tenasserim Peninsula in Burma. The following day, 1 (Indian) Squadron received orders to move to Burma.

War footing

Being detached so far away from its home airfield an immediate move to Burma was impossible. Another factor which prevented 1 (Indian) Squadron from reaching a war footing was a total lack of air gunners. The unit had only become operational for its duties along the Frontier and for this role there was no need for an air gunner as there was no aerial opposition. To rectify this, volunteers were called for to train as air gunners and following a good response, and a hurried training programme, the unit prepared to depart for Burma. Unfortunately, before the unit set out it sustained its first casualties of the Second World War when Lysander Mk II, R1989, undershot its approach, struck an embankment (bund) and overturned on December 20, 1941.

In the meantime, the Japanese made huge advances through Burma with such success military leaders predicted that India could be overrun. A dozen Lysanders of 1 (Indian) Squadron began the long journey to



Burma in stages, finally reaching its operational war station at Toungoo on February 1, 1942. It was at Toungoo where they were re-united with 28 Squadron of the RAF, also flying Lysanders, which the Indians had relived of its Frontier duties in mid-1940 at Miranshah.

Into action

On the night of 1 (Indian) Squadron's arrival Japanese bombers attacked Toungoo, but all of the Indian Lysanders escaped unharmed

and only minor damage was suffered by 28 Squadron's machines. Sqn Ldr Majumbar suspected that the Japanese bombers were operating from Mae-Haugsaum in Siam and he alone decided that it was already time to take the war back to enemy. On February 3 Sqn Ldr Majumbar and his air gunner set out, with just two Brewster Buffaloes of 67 Squadron as escort, to bomb the airfield at Mae-Haugsaum. Carrying a pair of 250lb bombs Majumbar flew low over the enemy airfield dropping one of his precious bombs ➤



Lysander Mk II, L4740, first served with 4, 225, 613 and 20 Squadrons RAF before joining 2 (Indian) Squadron in late 1941. The aircraft remained in India, finishing its service with 20 Squadron until it was wrecked on landing at Asansol in September 1942. Andy Hay/www.flyingart.co.uk



directly onto the only hangar. On February 4 Majumber repeated the feat although this time the entire compliment of twelve 1 (Indian) Squadron Lysanders attacked as well. Further success was achieved with bombs dropped on a wireless station and several dispersed Japanese aircraft before the unconventional bomber force headed for home, although to avoid enemy fighter interception 1 Squadron headed for Heho instead, returning to Mae-Haugsaum the following day.

Continuous Japanese success in the region saw the RAF's and IAF's precious aircraft spread thinly over a very large area. 1 Squadron found its limited resources sliced in two; one detachment being directed to Lashio to support the Chinese 5th Army and the remainder sent to Mingaladon in support of ground forces that were valiantly defending Rangoon. The Lysanders suffered on a daily basis whilst operating from poorly repaired landing grounds; undercarriage failures and seized tail wheels were a regular occurrence. The latter were particularly vulnerable to

shimmying, seizing or even breaking off and in several instances the ever resourceful Indian ground crews actually replaced the Lysanders tail wheels with wooden ones! Generally though, it was up to the pilot and air gunner to perform their own maintenance as landing grounds became more and more remote.

The primary role of all Lysanders in the region was that of tactical reconnaissance, but it was impossible to stop both the IAF and RAF crews from conducting as many offensive operations as possible. Low-level bombing raids became a short-lived forte; the Lysanders being flown so low the jungle canopy provided extra camouflage in order to evade Japanese fighters. So desperate were the allies in their attempt to stem the Japanese advance, a First World War tactic of throwing hand grenades from the rear cockpit was employed by the air gunners.

Withdrawal to India

Despite the efforts of the Lysander crews, the withdrawal back into India began all too soon from late February 1942 onwards. 1 (Indian)

Squadron was withdrawn from the Mingaladon region to Magwe where it was joined by the remnants of the Lashio-based machines on March 5. On March 7 the Japanese pushed towards Rangoon where Allied troops were turning defence into retreat by destroying all immovable military equipment so that it would not fall into enemy hands. However, two very valuable pieces of military hardware had been left at Magwe in the shape of two fully serviceable Hurricanes. Word filtered through to Sqn Ldr Majumber who, without hesitation arranged for two of his Lysanders to fly to Magwe, with Hurricane pilots in the rear cockpits to collect the two stranded fighters. As the lonely duo approached Magwe a Japanese aircraft flew over the airfield but, luckily for the Lysanders it turned out to be a reconnaissance machine photographing the airfield. Before the enemy aircraft could return to its home airfield to develop and print its film the Lysanders had landed and delivered their two Hurricane pilots, who quickly took off in the two fighters to escort the IAF aircraft back to Magwe.

LYSANDERS CREDITED IN INDIAN AIR FORCE SERVICE

(Mk I) P1674; P1675 (1 & 4 Sqn) Crashed in forced landing 70m NE of Hyderabad, Mar 24, 1943; P1677; P1690; P1694 (1 Sqn) Crashed on landing at Manzai after striking a boulder and cartwheeling, November 13, 1941; P1696; (Mk II) L4740 (2 Sqn); L4748 (2 Sqn) Bomb exploded on landing at Drigh Road, DBR May 3, 1942; L4756; L4765; L4767 (2 Sqn); L4770 (2 Sqn) Engine cut, undercarriage collapsed in forced landing 1m N of Golden North, Tamil Nadu, Sep 14, 1942; L4780 (2 Sqn); L4786 (4 Sqn); L4794 (4 Sqn) Lost height in valley and flew into hill near Datta Khei, DBF, May 12, 1942; L4797; L4798; L4801 (4 Sqn); L4815 (2 Sqn); L4816 (4 Sqn); N1209 (2 Sqn); N1212 (1 Sqn); N1224 (4 Sqn); N1242 (4 Sqn); N1255 (2 Sqn); N1256 (4 Sqn) Engine cut after t/o; dived into ground 5m NNW of Kohat, Mar 20, 1942; N1269 (4 Sqn); N1295 (4 Sqn); N1299 (2 Sqn); N1315 (1 AACU IAF); N1318 (2 Sqn); P1723; P1742; P9062; P9095; P9120; P9121 (4 Sqn); P9131 (4 Sqn); P9132; P9176 (2 Sqn); P9177 (4 Sqn); P9194 (2 Sqn) Undershot landing and tail knocked off; overturned, Yeravda, Mar 28, 1942; R1989 (1 Sqn) Undershot landing, hit bund and overturned, Peshawar, Dec 20, 1941; R2004 (4 Sqn); R2006 (4 Sqn); R2007 (1 & 2 Sqn); R2029; R2033 (1 Sqn) Swung on landing and u/c collapsed, Peshawar, Jan 16, 1942; (Mk IIIA) V9308; V9325; V9384; V9427; V9440; V9718 & V9738.

INDIAN AIR FORCE LYSANDER UNITS

1 Sqn	<i>Ittehad Men Shakti Hai</i> (Strength in Unity)
A/c	Mk I & II Aug 41 to Dec 42
Bases	Ambala, Peshawar, Dum Dum, Toungoo, Lashio, Mingaladon, Magwe
2 Sqn	<i>Amogh Lakshya</i> (Unwavering Aim)
A/c	Mk I & II Nov 41 to Dec 42
4 Sqn	<i>Maan Par Jaan</i> (Honour unto Death)
A/c	Mk I & II Feb 42 to Jun 43
Bases	Peshawar, Kohat, Miranshah, Hyderabad



One RAF unit which worked side by side with the Indian Air Force was 28 Squadron, reforming in India on April 1, 1920 with the F.2b. It operated the Lysander Mk II from September 1941 to December 1942 and was destined to remain in India and the Far East until 1978. *Via author*

Located behind a very dense stretch of jungle Magwe's location gave the IAF and RAF time to recover their forces while the Japanese advance slowed to a snail's pace. By March 12, 1 (Indian) Squadron only had four serviceable Lysanders on strength and these were handed over to the Burmese Communications Flight to undertake evacuation work. All of 1 (Indian) Squadron's pilots were returned to India aboard one of the first B-17s in theatre, while they pondered what equipment could possibly replace their beloved Lysanders. 1 (Indian) Squadron's efforts had not gone unnoticed and for his outstanding leadership Sqn Ldr Majumdar was awarded the DFC while W/O Harjinder Singh, the SNCO in charge of all ground maintenance, was deservedly awarded the MBE. Once safely back at Peshawar the unit was reformed and re-equipped with the Hurricane – without a single doubt being expressed by any senior member of staff about how well the Indians would cope with such 'modern' equipment.

Tribal troubles

While 1 (Indian) Squadron converted to the Hurricane, 4 (Indian) Squadron was being formed at Peshawar with the Lysander Mk I and Mk II under the command of Flt Lt H U Khan. Its first batch of four Lysanders arrived on February 16, 1942, but the unit was not given much time to work up before its first task was issued. Four aircraft were detached to Kohat for operations along the Frontier because local tribesmen had taken advantage of the idea that Japan could invade the south-eastern corner of India. The tribesmen had anticipated that India would reduce its ground forces along the Frontier and, therefore, plundering attacks across the north-western plains could be undertaken relatively un-harassed by the Indian Army. These ideas were quickly quelled when 4 (Indian) Squadron Lysanders, operating from Miranshah, conducted bombing operations against the tribesmen in the Sharani region. The Central Indian Hur tribe also began rioting, but this was soon controlled after a detachment of Lysanders were sent to Hyderabad.

By late 1942 the Lysanders of 4 (Indian) Squadron were performing army co-operation duties in support of the 7th Indian Division in the Risalpur region, but by this stage this tasking began to dwindle. The days of the Lysander in squadron service, both with the IAF and RAF were numbered in India as 2 and 4 (Indian) Squadrons and the RAF's, 20 and 28 Squadrons converted to the Hurricane.

This was certainly not the end for the Lysander in India which was still needed for target-towing duties, special supply operations along the Burmese Front and general communication duties. Lysander Mk IIIs and Mk IIAs were also shipped to India for these roles and a few of the latter did see service with 2 and 4 (Indian) Squadron service. Many remained active until the end of the Second World War in India.

The Lysander had once again proved that in determined hands it could be a useful aircraft, but just as in France, its primary role as a reconnaissance machine in India was not its strongest point. ❖





The pilot and air gunner of Lysanders always took an active role in what and how the day's ordnance was loaded onto their aircraft's stub wings. The pilot in this case appears to be loading, or connecting the item on the port stub wing while his air gunner keeps a watchful eye over the armourers loading the starboard stub wing. *Aeroplane*

THE 'LIZZIE' AND THE 'SALVATION NAVY'

A black and white photograph showing three RAF ground crew members in uniform packing an M Type dinghy on a tarmac. The dinghy is laid out on the ground, and the crew members are carefully placing items into it. In the background, a large biplane, identified as a Walrus, is visible, along with other aircraft and personnel. The scene is set on a flat, open area, likely an airfield.

RAF ground crew pack an M Type dinghy which will be carried in the SBC (Small Bomb Container) under the stub wing of the Lysander. Note the Walrus warming through its Pegasus engine in the background; all of the RAF's official Air-Sea Rescue (ASR) squadrons operated both types together at first. *Aeroplane*

During the early stages of the Second World War the RAF was slow to realise how many aircrew it was unnecessarily losing at sea following a successful bail out or ditching. Surplus Lysanders were allocated from Army Co-operation to fill the breach in what would become the building blocks of an effective Air-Sea Rescue service. Martyn Chorlton outlines the role and the units



Ground crew fit a dinghy rescue pack, specifically designed for the Lysander, to the starboard stub wing of a 277 (ASR) Squadron Lysander. Based at Stapleford Tawney, the squadron also operated detachments from Martlesham Heath, Shoreham and Tangmere. *Via author*

Air-Sea Rescue

For the first year of the war the task of ASR was the responsibility of the station from which the missing aircraft was operating from. It was a completely uncoordinated service and it was not until the enemy began to place a chain of rescue rafts in the Channel and operate specialised rescue float-planes that the RAF realised it needed a dedicated service.

During the early stages of the Battle of Britain alone at least 225 RAF aircrew had been lost at sea. By the end of July 1940 the CO of 11 Group, AVM K R Park, made an agreement with the Army Co-operation wings to allocate twelve Lysanders for 'off-shore searching' duties. It was not until August 22 that the 'borrowed' Lysanders were officially placed under the control of Fighter Command. They were utilised for sea searches up to 20 miles off shore, covering the English coastline from the Wash to the Bristol Channel

and the South Wales coast as far as Milford Haven.

The Lysander was incapable of carrying the standard Lindholme rescue gear but, by early 1941, the aircraft had its own specifically designed equipment. It consisted of four small 'M' Type dinghies, distress flares, food and water all packed in a valise which could be fitted inside small bomb containers and carried under the stub wings.

Another six Lysanders had been added to Fighter Command's ASR network by May 1941 giving even greater coverage. This now ranged from the mouth of the Humber to the Isle of Man and, to cover this vast area, two Lysanders were based at Coltishall, Exeter, Manston, Martlesham, Pembrey, Portreath, Shoreham, Tangmere and Warmwell. Expansion continued throughout 1941 and by October the first of four specialised squadrons was formed. 275 Squadron at Valley, 276 Squadron at Harrowbeer and 278

Squadron at Matlask were all in formed October and 277 Squadron followed at Stapleford Tawney in December.

By now, 36 Lysanders were available across the country making their presence felt to such an extent that they were nicknamed the 'Salvation Navy'. However, by 1942 a problem with spares was encountered as the type was out of production and large quantities of parts had been shipped to the Middle East and India where the Lysander was still operational. Fighter Command was forced to look for an alternative and in stepped the Defiant, of which there were plenty available following the introduction of the Beaufighter into the night fighter role. By mid-1942 the strength of the ASR squadrons had quickly turned with the Defiant now the dominant type; by the year's end only four Lysanders remained on strength. By early 1943 the Lysander had served its purpose in another important role and was withdrawn. ➤

The Lysander ASR Flights (United Kingdom)

Prior to the Lysander ASR squadrons being established a rather confusing system of ten 'unnumbered' flights was authorised by the Air Ministry on May 14, 1941. Each flight was allocated two Lysanders, a dozen of which were acquired from 4, 13, 16, 225, 613 and 614 Squadrons while the remainder were drawn from storage. From June 1941 the number of Lysanders allocated to each 'flight' was raised to 2+1 and these were added to the following stations' establishments; 10 Group (Exeter, Pembrey, Portreath and Warmwell); 11 Group (Kenley, Manston, Martlesham Heath and Tangmere) and 12 Group (Coltishall).

The aircraft were eventually broken down into the following 'sections' (or the ten unnumbered flights) from which point they evolved into operational squadrons.

10 Group

1) Formed May 14, 1941 at Warmwell; Became 'A' Flt, 276 Squadron with 2+1 Lysander on October 21, 1941

2) Formed May 14, 1941 at Roborough; Absorbed into 276 Squadron October 21, 1941.

3) Formed May 14, 1941 at Pembrey; To Fairwood Common July 4, 1941; Became 'D' Flt, 276 Squadron with 2+1 Lysander on October 21, 1941

4) Formed July 18, 1941 at Portreath with 2+0 Walrus; Became 'C' Flt, 276 Squadron at Perranporth with 2+1 Lysander & 1+0 Walrus November 11, 1941. (276 Sqn HQ and 'B' Flt (2+1 Lysander) were formed at Harrowbeer on October 21, 1941.

11 Group

5) Formed May 14, 1941 at Martlesham Heath (attached to 613 Squadron); Became 'A', 277 Squadron with 2+1 Lysander on December 22, 1941.

6) Formed July 18, 1941 at Hawkinge with 2+0 Walrus; Became 'B' Flt, 277 Squadron with 2+1 Lysander & 1+0 Walrus on December 22, 1941.

7) Formed May 14, 1941 at Shoreham; To Freiston July 9, 1941; To Shoreham October 15, 1941; Became 'C' Flt, 277 Squadron with 2+1 Lysander on December 22, 1941.

8) Formed in 1941 at Merston; To Westhampnett on November 15, 1941; To Shoreham November 30, 1941 and absorbed into the Shoreham Flight.

12 Group

9) Formed July 1941 at Matlack; 2+0 Walrus added in August 1941; Became 'A', 278 Squadron on October 1, 1941. This unit was (officially or unofficially?) referred to as 3 ASR Flight.

10) Formed July 18, 1941 at Coltishall with 2+0 Walrus; Became part of 278 Squadron on October 1, 1941. (278 Sqn HQ formed at Matlack on October 1, 1941).



Depicted during its final tour of duty with 276 Squadron, Lysander Mk II, T1696, first saw service with 2 Squadron and then with the Sea Rescue Flight at Roborough. Unfortunately the aircraft was lost during an ASR search on August 24, 1942. Andy Hay/www.flyingart.co.uk

The Lysander ASR Squadrons

275 Squadron

Formed at Valley on October 15, 1941 with Lysander Mk I (1) and Mk III and Walrus; Detachments were undertaken at Andreas and Eglinton; Defiant Mk I added from May 1942 but gone by June 1943; Anson Mk I from March 1943 onwards; Lysander retired in September 1943.

Aircraft: (Mk I) L4695; (Mk IIIA) V9405, V9737, V9738, V9739, V9748 and V9749.

276 Squadron

Formed at Harrowbeer on October 21, 1941 with Lysander Mk III and IIIA; Hurricane Mk I arrived in November 1941 and remained until January 1942; Walrus from January 1942; Detachments included Roborough, Portreath, Warmwell, Perranporth and

Fairwood Common; Lysander retired in May 1943.

Aircraft: (Mk III) T1620, T1621, T1696, T1698; (Mk IIIA) V9296, V9310, V9350, V9444, V9505, V9513, V9710, V9735 and V9743.

277 Squadron

Formed at Stapleford Tawney on December 22, 1941 with Lysander Mk IIIA and Walrus; Detachments to Martlesham Heath, Hawkinge and Shoreham; Defiant Mk I arrived in May 1942 but withdrawn by May 1943; To Gravesend December 7, 1942 and further detachments to Hawkinge, Martlesham Heath and Shoreham; Spitfire Mk IIC arrived in February 1943 and served until May 1944; To Shoreham April 15, 1944 plus detachments to Martlesham Heath, Warmwell, Hurn and Hawkinge; Spitfire Mk VB arrived in April 1944; Lysander retired in June 1944.

Aircraft: (Mk I) P1684; (Mk IIIA) V9364,

V9402, V9431, V9445, V9473, V9483 (Engine failed, crashlanded into trees and lost wing at Fosholt Farm, Kent on April 16, 1942), V9487**, V9488 (Overshot landing and hit fence at Hawkinge on May 7, 1942), V9545, V9547, V9583, V9588 and V9607.

278 Squadron

Formed at Matlack formed from 3 ASR Flight on October 1, 1941 with Lysander Mk IIIA and Walrus; Detachment to North Coates; To Coltishall April 21, 1942; Detachments to North Coates, Woolington, Acklington, Hutton Cranswick, Ayr, Drem, Castletown, Peterhead and Sumburgh; Lysander replaced by Anson Mk I in February 1943.

Aircraft: (Mk IIIA) V9297, V9369, V9538, V9541, V9609 and V9709.

**Served with 277 Squadron then transferred to 16 Squadron before returning to 277 Squadron.

Ground crew of an unspecified ASR squadron
mount a Mk VB Parachute Supply Dropper to the
stub wing of a Westland Lysander.
Topical Press via Aeroplane



A remarkable design solution for an anti-invasion aircraft, the prototype Lysander K6127 only spent a few months in the guise of the P.12 Wendover. The aircraft is pictured at Yeovil in July 1941.
Via Martyn Chorlton

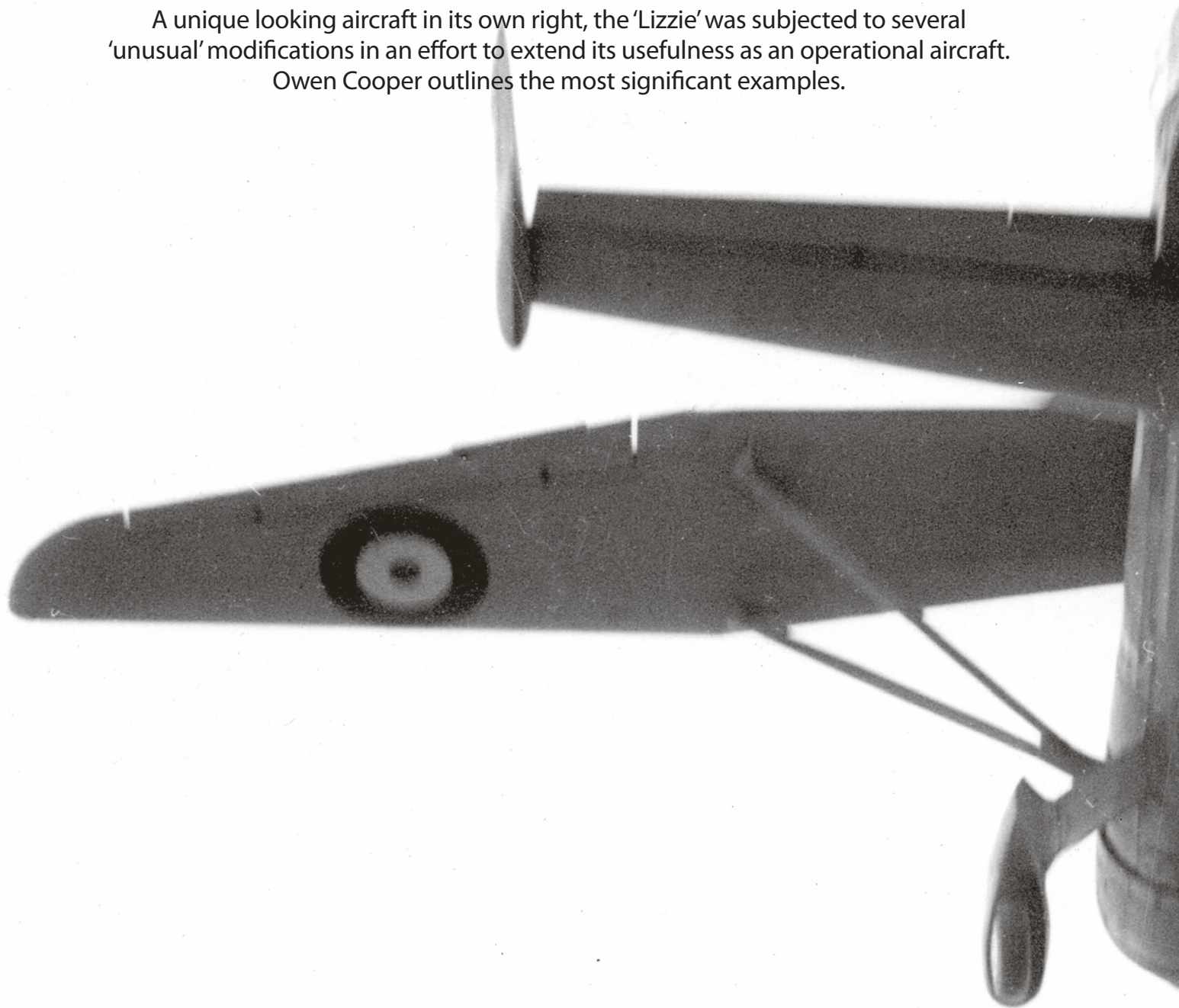




THE UGLY DUCKLINGS

A unique looking aircraft in its own right, the 'Lizzie' was subjected to several 'unusual' modifications in an effort to extend its usefulness as an operational aircraft.

Owen Cooper outlines the most significant examples.



The coach-built P.12 Wendover

The prototype Lysander, K6127, was a hard working aircraft which was subjected to several of the modifications within this article. The most striking was the installation of Delanne-type tandem wing, combined with a Boulton-Paul rear turret (only a mock-up was ever fitted). Subjected to many names over the years, not all flattering, Westland's designated the aircraft as the P.12 Wendover while in RAF circles it was generally known as the 'Tandem Wing' Lysander.

Converted in late 1940 the aircraft was designed to be used as an anti-invasion strafing aircraft but as the Lysander's main armament was facing rearwards, the chances of it taking a large amount of fire from the

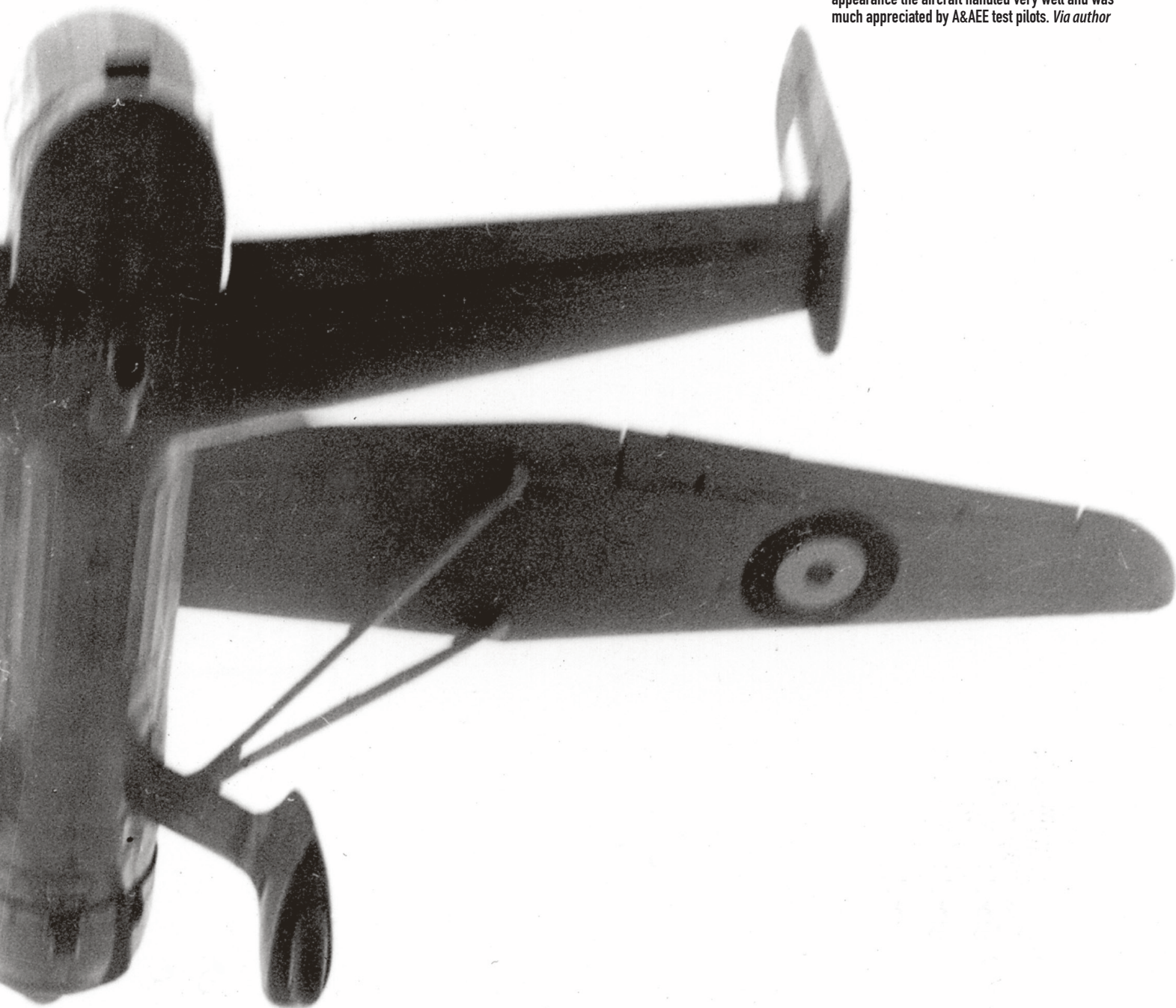
ground was high, especially considering the speed the 'Lizzie' would be approaching at. The rear fuselage modification work was carried out by the coach-makers, Harringtons of Hove, while the detailed design work was initiated at Yeovil. The standard wing was kept in situ but to counteract the rear turret and generate more lift, a tailplane with large fins as endplates was installed. This still placed the Centre of Gravity (CoG) a lot further back than the original aircraft, but after being flight tested by Harald Penrose he reported that aircraft handled very well.

With the threat of an enemy invasion diminishing by the day the Wendover did not arrive at the A&AEE at Boscombe Down until October 1941. The following is the official report on the trials of K6127 in its new guise.

A&AEE Report No. 694; the Tandem Winged Lysander

The first prototype Lysander, K6127, was flown in June 1936 and was to have a much photographed, long and colourful career, being sent pre-war to the north-west frontier of India for operational tests under active service conditions. That particular aircraft was to be the subject of A&AEE Report No. 694g and to become unique among the 1,368 Lysanders built.

Known as the Tandem Wing development the prototype, K6127, was modified to take a wide span tailplane - virtually a second wing designed to the French Delanne formula - with twin end-plate fins. That was not the extent of the modification, as Report 694 states: The fuselage was terminated by a mock-up of a



Converted to the remarkable Delanne configuration in the summer of 1941 the prototype Lysander, K6127, was re-configured back to its original layout by early 1942. Despite its ungainly appearance the aircraft handled very well and was much appreciated by A&AEE test pilots. *Via author*

Boulton-Paul four gun (.303in) turret. The principle was merely an experiment to determine whether it was possible to provide really adequate rear defence on small aircraft without destroying the general flying characteristics.*

The second wing, which is what in reality the tailplane became, provided no less than 43% of the net wing area. The size, and therefore lift, of this 'tailplane' was required because of the weight of the rear turret; its guns and gunner were at the maximum moment removed from the CoG datum. The CoG limits of this unique aircraft, from forward to aft, expressed as a percentage of the forward wings chord, were from 45.5% to 58.2% - a considerable range.

The brief performance tests began some time in late January or early February

1942 (the report is dated February 17), the first tentative ground taxiing trials being conducted below 40 mph. Handling was easy but, above that speed, it was discovered that neither brakes nor full rudder could cope with keeping the Lysander on course. Hardly surprisingly, in view of the weight aft, it was found that a full application of the wheel brakes produced no tendency for the aircraft to nose over, even with the CoG fully forward.

In spite of the marginal directional control the take-off seems to have been normal and the aircraft was reported as neutrally stable in the climb with the CoG aft. The twin rudders were light and effective, although the test pilot found them moderately heavy at 285mph in a dive.

The ability of the standard Lysander to

fly slowly was always considered its main asset. The stalling speed is usually given as 65mph but in fact the 'Lizzie', in the hands of a skilled pilot, could be trimmed into a stable, nose high, steep controlled stall, with the rate of descent determined by the throttle. It was possible, when in this condition, to continue to a perfectly satisfactory three point landing, though pilots were warned that they might thus land safely in a field so small that to fly out of it could prove impossible.

The Tandem Wing rear turret modification does not seem materially to have compromised the ability of the Lysander to emulate, if not a helicopter, certainly an autogyro: the A&AEE test pilots found that, even with the CoG at the maximum forward limit, the aircraft



One of a host of ideas for a dedicated anti-invasion aircraft, K6127 was modified with a new rear fuselage for a Boulton-Paul four gun turret. While the design work was carried out at Yeovil, the actual work was handled by coach-builders, Harringtons of Hove. *Via author*



Officially designated as the P.12 Wendover, Westland had hoped that the aircraft would result in a substantial order from the Air Ministry. However, the anti-invasion role it was intended for had all but past by the time the aircraft was being trialled at Boscombe Down. *Via author*

remained in level flight under full control with the stick right back, at the very low speed of 58mph - this at an all-up weight around 6,000lb. With the CoG aft, the testers noted a slight tendency for the wing to drop when the stick was brought right back at 60mph. Interestingly, the famed Lysander stalled stable glide could still be made (with the slats fully open) at 58mph. Conventional dives were reported as 'smooth and remarkably steady'. With the CoG forward the Lysander would, if trimmed for full throttle level flight, recover itself from a dive, hands off. At normal or aft CoG,

however, the pilot had to initiate the recovery, though the stick force required was not excessive and recovery was positive and immediate.

*While the A&AEE only viewed the aircraft as an experimental machine, Westland designed the Wendover with the hope of a large production order in mind.

The anti-invasion 'Pregnant Perch'

The slightly less well-known conversion of Lysander Mk I, L4673, into an anti-invasion aircraft was carried out when

Britain had its back to the wall following the fall of France. It was nicknamed the 'Pregnant Perch' because of the expanded lower fuselage created for a new ventral gun position, enabling the gunner to fire downwards at troops or vehicles. Clearly not an attractive looking modification, hence the nickname, the project was cut short on August 7, 1940 when L4673 had to force land after engine failure with Westland test pilot George Snarey at the controls. Snarey managed to escape unhurt but L4673 was a write off.



The demise of the 'Pregnant Perch'. The first production aircraft, L4637, was converted into another anti-invasion idea which involved a ventral gun position for troop and beach strafing. In August 1940 test pilot George Snarey suffered an engine failure, but escaped unhurt after a challenging uphill crash landing under some HT cables. L4637 was written off along with the idea. *Via author*



Although the Lysander was already designed to carry out dive-bombing, the concept was taken one step further when a pair of wing-mounted bench-type airbrakes were fitted to a single aircraft in 1940. It is most likely that the air brakes were fitted for experimental rather than operational reasons. *Via author*

Dive bomber

The Lysander was more than capable of attacking an opponent in a shallow dive, but could not be described as a dive bomber. One aircraft, following the anti-invasion theme, was converted to this role although the unknown Lysander was more likely used as a 'guinea pig' to trial a set of 'bench-type' airbrakes. Each airbrake was approximately 8ft long and 18ins deep and deployed from the underside of the wing. How effective they were is unknown, but a total of 24sq ft being pushed into the airflow must have slowed the aircraft considerably.

A Lysander with even more lift!

Lysander Mk II, P9105, an aircraft which had already spent a great deal of time with the RAE was selected to trial a new high-lift wing. Designed by aircraft structural engineer H J Steiger and built by the Blackburn Aircraft Company, the Blackburn-Steiger single-spar wing only had a span of 38ft and was swept forward by nine degrees. The wing had a parallel-chord, full span flaps and slats and lateral control was initiated by wing-tip spoilers. It is presumed that the wing worked well with the Lysander, but as

it was only an experiment the aircraft reverted to its standard wing and served on until July 1943 with 516 Squadron.

Non-standard undercarriages

The ever dutifully prototype, K6127, was called upon again during 1942 to trial two different kinds of undercarriage set-ups. The Lysander was already adept at getting in and out of small spaces but Dowty thought it could make the aircraft even better by fitting a castoring main undercarriage. The idea was that aircraft would be able to take-off or



Not the most radical of Lysander modifications, the large bench-type airbrakes would clearly have radically slowed the aircraft whilst diving. *Via author*



Specifically for research purposes only Lysander Mk II, P9105, was fitted with a Blackburn-Steiger parallel-chord reduced span high-lift wing. It was fitted with full span flaps and slats and lateral control was achieved by wing-tip spoilers. The wing only had a span of 38ft and a forward sweep of 9°. *Via author*



Swiss-born H J Steiger originally cut his designer teeth working for Beardmore and General Aircraft before moving to Blackburn to later become their chief designer. Steiger first applied for a patent for his wing designs in 1930 with none other than (for the benefit of the editor) Mr A E L Chortton and a Mr R A de H Haig. *Via author*



▲ Another idea for giving the Lysander more firepower was the fitment of a four-gun power-operated turret, aft of the wing, in the position of the rear cockpit. Only reaching the mock-up stage, the idea was abandoned because the wing restricted the field of fire. *Via author*

◀ Not long after the outbreak of the war the prototype, K6127, was fitted with a pair of Oerlikon 20mm cannons. They were fitted above the wheel fairings but were still just outside of the arc of the propeller. Designed for attacking invasion barges, the idea was dropped by mid-1940. *Via author*

land into the wind, even if the runway was out of the wind! Obviously, crosswind landings are just one of many skills that should be in the repertoire of even the most average pilot and the idea never materialised as an 'optional extra' on a future Second World War aircraft. Staying on the theme of small and rough landing grounds, K6127 was also trialled with a pair of caterpillar tracks instead of the main landing gear.

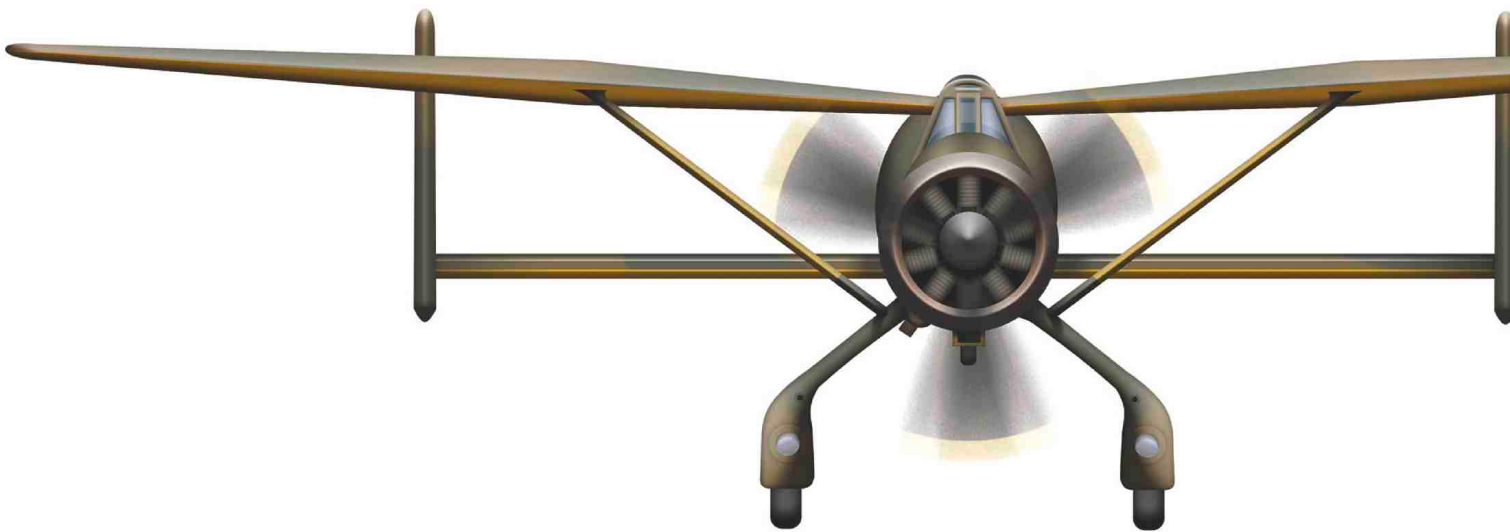
Defence and attack

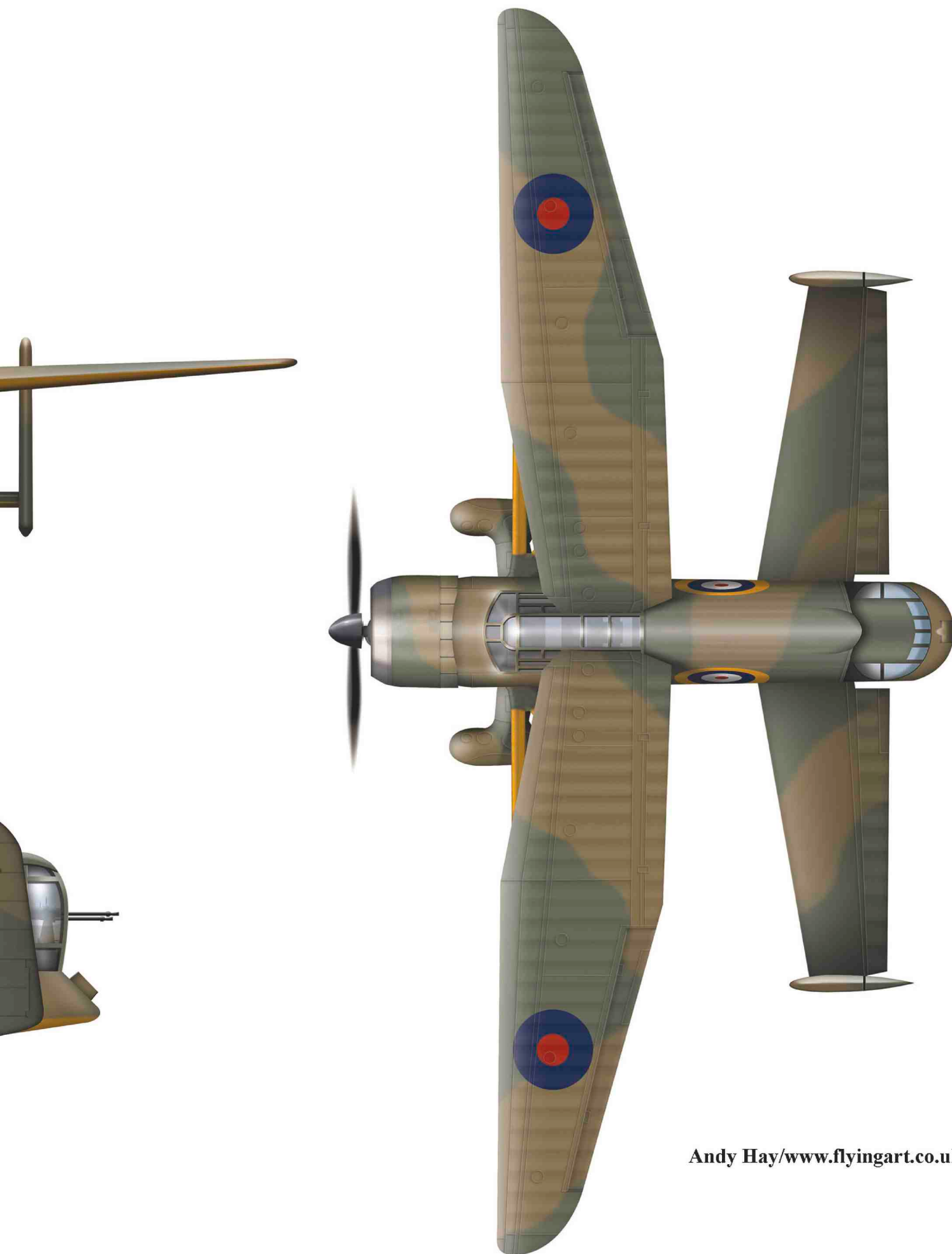
One of the first non-standard armament trials once again involved K6127 and again followed an anti-invasion theme. During July 1940, K6127 was sent to the A&AEE sporting a pair of Oerlikon 20mm cannon mounted above each wheel fairing, firing outside of the arc of the propeller. Designed specifically for use against German invasion barges, the exposed cannons would have given the Lysander quite a forward-firing clout.

Another weapons proposal was to fit a Boulton-Paul Type 'A' Mk III turret in the observer's position. Armed with four .303in machine guns, the defensive capability of the aircraft would have been dramatically increased. The proposal only ever reached the mock-up stage although a 'real' turret was fitted into the fuselage of Lysander Mk II, P1723, for demonstration purposes. ❖

Westland P.12 Wendover, K6127

The aircraft is depicted as it would have appeared during its trials with the A&AEE at Boscombe Down which began on October 31, 1941. However performance trials did not begin until late January 1942.





Andy Hay/www.flyingart.co.uk

'BUILDERS OF TRANSPORT FOR CANADA'

By the end of the Second World War there were more Lysanders extant in Canada than any other part of the world. David H Smith outlines Canadian production and RCAF service with an aircraft that is still claimed as one of Canada's own today.

Hamilton production

During the late 1930s Canada began an extensive expansion programme of similar proportions to the RAF which was bolstered by the massed production of several British aircraft designs including the Blenheim (aka Bolingbroke), Hurricane and the Lysander. Once the expansion period was over for Canada the RCAF, which was a relative unknown during the 1930s, had grown to become the fourth largest air force in the world.

Production of the Lysander, at first, was somewhat conservative with an order for just 28 Lysander Mk Is placed with National Steel Car Corporation (NSCC) based in Hamilton, Ontario in April 1938. The NSCC had long built its reputation on the production of freight trucks and railway carriages, and in recent years had supported the fledgling Canadian aircraft industry by making steel panels and aluminium drop forgings. The NSCC's proud slogan was 'Builders of Transport for Canada' but this early order to build the Lysander saw the company quickly move from road and rail to the production of aircraft. Further orders

were placed with the NSCC by the British Government for 50 Lysander Mk Is which was later increased to 150. The plan was to ship the Lysanders to Britain in component form where they would be built by Westland and potentially Scottish Aviation, but none of the additional orders came to fruition as they were cancelled by the Ministry of Aircraft Production in 1940.

Prior to the NSCC beginning production of the 28 Lysanders the specification was altered from the Mercury engine to the Perseus, therefore the first Canadian-built machines were actually Mk IIs. These were built at NSCC's new factory at Malton, Ontario and apart from a few metal panels being manufactured in a single piece, rather than two, the aircraft were identical to a Westland-built machine.

Into RCAF service

The first Canadian-built Lysander Mk II was No.416 which was delivered to the RCAF on September 7, 1939 just three days before Canada declared war on Germany. On that day the order was raised to 75 Lysander Mk IIs which would be serialised 416 to 490. Early

flight trials went according to plan for the Lysander – other than the fact that it was not up to the job of coping with a Canadian winter! The cockpit was redesigned with an improved heating system and the original draughty canopy was upgraded to make life considerably more comfortable for the crew.

110 (Army Co-operation) Squadron, RCAF was the first recipient of the Canadian Lysander Mk II and was also the first unit to be ordered into service overseas. The squadron sailed from Halifax, Nova Scotia on February 16 leaving their aircraft behind, bound for Liverpool which was reached ten days later. On February 27, 110 Squadron arrived at Old Sarum by train where it was issued with twelve Lysander Mk IIs which were taken from RAF stock. Despite 'high jinks' by the Canadians accidents were rare and the unit's first loss was the result of mechanical failure rather than fooling around. On March 19, 1940 the Perseus engine of Mk II, N1316 failed after taking off from Old Sarum and a forced landing was successfully made near Salisbury, resulting in a collapsed undercarriage but no injuries to the two crew.





A general view of the snow-covered apron at Rockcliffe shows at least a dozen Lysanders belonging to 112 and 123 Squadrons. *Via author*



The National Steel Car Corporation of Canada licence built 75 Lysander Mk IIs in the serial range 416 to 490. On the left, is one of the early aircraft, No.428, while serving with 111 (AC) Squadron at RCAF Station, Patricia Bay, BC during 1940. No.428 carried out the squadron's first operation of the war on June 29, 1940 when it reported sighting a submarine off Otter Point. The Lysander remained on RCAF strength until December 1946. *Via author*



The very first Canadian-built production Lysander was Mk II, No.416 which saw RCAF service with 112 and 122 Squadrons. *Andy Hay/www.flyingart.co.uk*



Ex-RAF Lysander Mk II, R9003, in service with 110 Squadron RCAF at Odiham. The aircraft was returned to the RAF, converted into a target tug and went on to serve with 2 AOS and 7 AGS. *Via author*

After an exuberant period during the 'Phoney War', the Canadians began to receive news of how their RAF colleagues had fared during the Battle of France; and it was not encouraging. In the meantime at Malton, twelve Canadian Lysander Mk IIs were being dismantled and crated to compensate for the dozen taken from RAF stocks. In the end only six (Nos.434 & 436 to 440) actually managed to cross the Atlantic and on arrival they were taken on RAF strength as DG442 to DG447, but all briefly served with 112 Squadron RCAF.

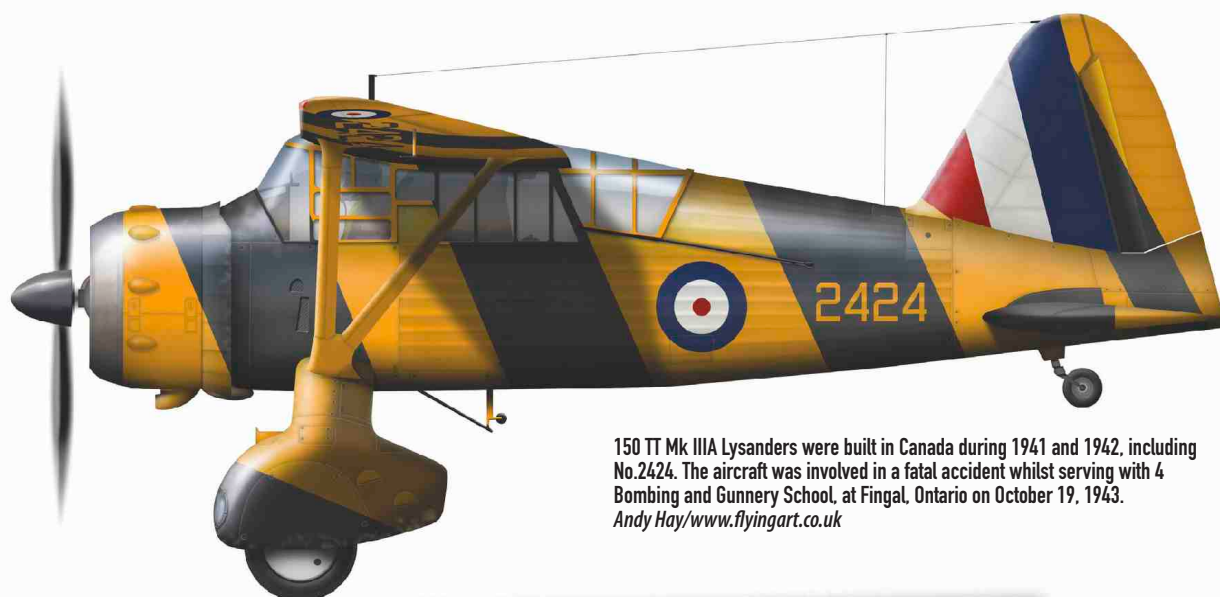
Trials unit

On June 9, 1940, 110 Squadron was moved to

Odiham where, at first, the unit was used by the RAF as a specialist Lysander trials unit. One example of this new role was when the prototype K6127 was attached to the unit while it carried a pair of 20mm Oerlikon cannon from July 13. During the same period 110 Squadron was also employed to carry out anti-invasion patrols which was a common task for UK-based Lysander squadrons at that time. Operational training also continued including dive bombing practice, which brought about the demise of Lysander Mk II, N1301 on July 17, 1940. The pilot of N1301 pulled out of his dive too late, struck some trees and crashed at Forest Row in Sussex. 110

Squadron also became the first operational unit to receive the Lysander Mk III when R9001 to R9009 were delivered on August 23. Out of this batch, which was a partial replacement for their original Lysander Mk IIs, only one aircraft was lost. On January 23, 1941 Mk III, R9004, lost height after a night take-off, crashed and burst into flames two miles west of Odiham. All of the remainder went onto further service with multiple units and five were later converted into target tugs. Further Mk III Lysanders were delivered during 1940 but by April 1941, 110 Squadron was re-equipped with the Curtiss Tomahawk although at least four Lysanders remained on strength at the time.

One of 57 ex-RAF Lysander Mk III TTs transferred to the RCAF in 1942 and re-serialled 1536-1592. Although yet to be confirmed, 1589 could be ex-V9281 which originally served 1 SAC and 41 OTU as an Mk IIIA. *Via author*



150 TT Mk IIIA Lysanders were built in Canada during 1941 and 1942, including No.2424. The aircraft was involved in a fatal accident whilst serving with 4 Bombing and Gunnery School, at Fingal, Ontario on October 19, 1943. *Andy Hay/www.flyingart.co.uk*



The Canadian Prime Minister, the Right Honourable William Lyon Mackenzie King (centre in fur coat), whilst inspecting the aircraft of 110 Squadron RCAF at Rockcliffe. The aircraft behind is the second production Lysander Mk II, 417. *Via author*



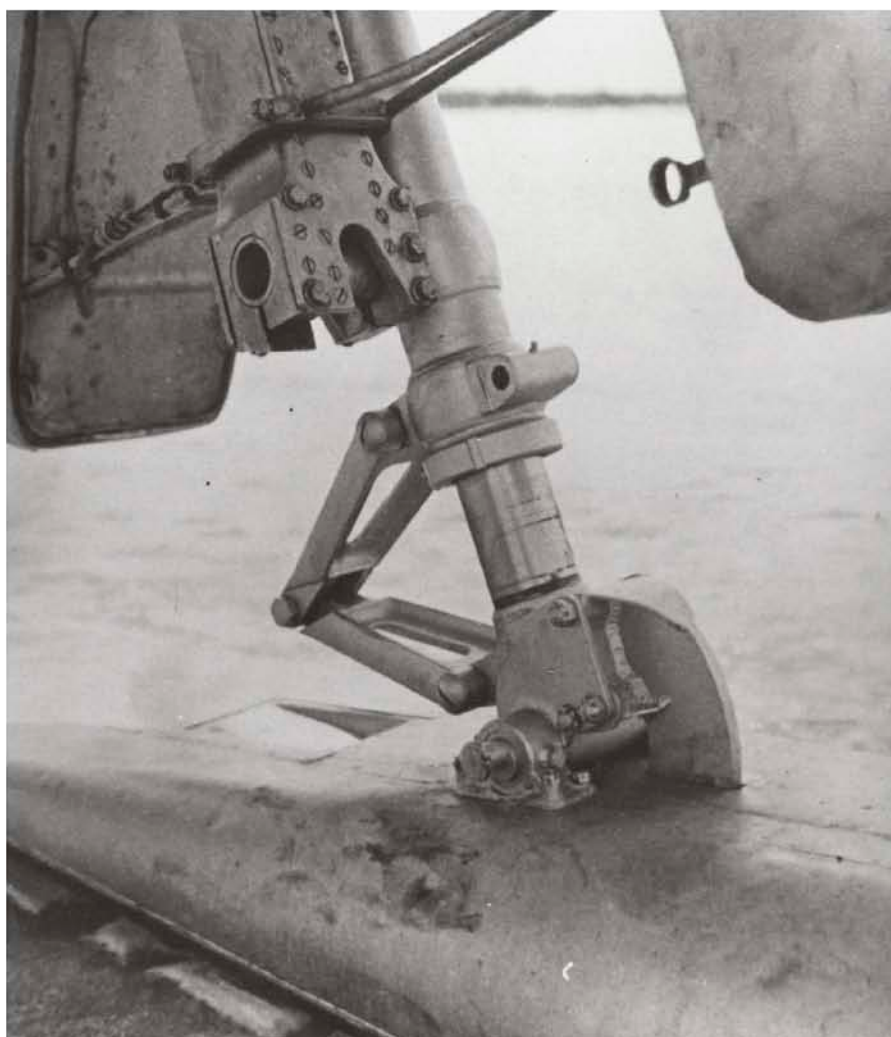
Originally constructed as a Lysander Mk IIIA by Victory Aircraft, No.2322 was one of a batch of 150 aircraft built from late 1941 through to September 1942. Many of the Victory-built 'Lizzies' were converted to TT standard complete with the effective very high-visibility black and yellow livery.
Via author

Canadian Lysander expansion

While 110 Squadron worked up at Rockcliffe a second unit, 111 (Thunderbird) Squadron, was mobilised on September 10, 1939 and moved to Patricia Bay with a few Atlas aircraft on strength. These were joined by four Lysanders which remained with the unit until January 1941. 118 Squadron followed when it first received Lysanders at Saint John from December 1939. The few Lysanders on strength had gone by August 1940 when 118 Squadron was redesignated as a fighter squadron, but this never came to fruition and the unit was disbanded in late September 1940.

Next to receive the Lysander was 112 (City of Winnipeg) Squadron which, like 118 Squadron, was mobilized on September 10, 1939 and moved to Rockcliffe where it was attached to the Canadian Active Service Force in readiness for service overseas. The first Lysanders were delivered to 112 Squadron in March 1940 and by the time the unit reached Britain, France had already fallen and the unit was relegated to training duties until the end of the year. By then the unit was redesignated as 2 (Fighter) Squadron at Digby and ultimately became 402 (Fighter) Squadron.

1941 saw two brand new RCAF squadrons formed, both with Lysanders. The first was 400 (City of Toronto) Squadron at Odiham on March 1, 1941 with the Lysander Mk III. The unit was actually 110 Squadron RCAF re-numbered; the first of 70 new squadrons – generally all from a Commonwealth background – which were integrated into the RAF for the remainder of the Second World War. 400 Squadron operated the Lysander Mk III until December 1941 alongside the Tomahawk Mk I, IIA and IIB which remained on strength until July 1942, by which time the Mustang Mk I continued the unit's original army co-operation role.



It is not clear whether it was adapted in any great quantity but at least one RCAF Lysander was trialled with skis instead of its conventional wheeled undercarriage. The aircraft in question was Lysander Mk II, 459, and like the Finnish Air Force machines there is no reason why the skis were not successful. *Via author*

RCAF UNITS

110 (City of Toronto) Sqn

A/c Mk II Dec 39 to Aug 40
Mk III Aug 40 to Feb 41
Codes AY & SP
Bases Rockcliffe (Ottawa), Old Sarum, Odiham & Redhill
A/c: (Mk II), L4788-L4790; N1209; N1220; N1265; N1267; N1268 & N1301 (Lost Jul 17, 1940); RCAF serials 417; 428; 429; 432 & 433; N1316 (Lost Mar 19, 1940); P1694-P1698; P1730-P1732; P1743; P9095; P9104; (Mk III), P9113; P9114; P9116; P9123; P9125; P9128; R9001-R9009 (R9004 lost Jan 23, 1941); R9116; R9117; R9119; R9120; T1434; T1443; T1448; T1460; T1563 & T1564

111 (Thunderbird) Sqn

A/c Mk II Dec 39 to Jan 41
Code TM
Bases Patricia Bay (Vancouver)
A/c: (Mk II), 434-440 & P1729

112 (City of Winnipeg) Sqn

A/c Mk II Mar 40 to Dec 40
Code XO & AE
Base Rockcliffe
A/c: (Mk II 'XO'), 416; 420 & 436-44; (Mk II 'AE'), 436-440; P1729; P9178

118 Sqn

A/c Mk II Dec 39 to Aug 40
Bases Saint John
A/c: (Mk II), 422; 423 & 430-432

121 Sqn*

A/c Mk II TT Jan 42 to Mar 44
Code EN
Base Dartmouth
A/c: (Mk II TT), 418; 450; 1559 & V9519

*When re-formed 121 Squadron was created from the Eastern Air Command Communications Flight and the Target Towing Flight. By July and August 1942 respectively the unit also comprised a Rescue and Salvage Flight and a Calibration Flight.

122 Sqn**

A/c Mk II TT Jan 42 to Mar 44
Code AG
Base Patricia Bay
A/c: (Mk II TT), 416; 446; 483 & 485
**Formed as a composite unit from Western Air Command Coast Artillery Co-operation & Communications Flight.

123 (Army Co-Operation) Sqn***

A/c Mk II Jan 42 to Jun 43
Code VD
Base Rockcliffe
A/c: (Mk II), 421; 454; 477 & 488
***Formed as the School of Army Co-operation; redesignated 123 (Army Co-operation Training) Squadron on January 15, 1942.

400 (City of Toronto) Sqn Percussuri Vigiles (On the watch to strike)

A/c Mk III Mar 41 to Apr 41
Bases Odiham, Redhill, Gatwick, Bottisham & Weston Zoyland
A/c: (Mk III), R9001; R9002; R9005-R9007; R9009; R9119; P9125; T1434; T1436 (Lost May 10, 1941); (Mk IIIA), V9373

414 (Sarnia Imperials) Sqn Totis Virbis (With all our might)

A/c Mk III Aug 41 to Jun 42
Bases Croydon
A/c: (Mk III), R9112; T1563; T1671; (Mk IIIA), V9381; V9382; V9445; V9516 & V9586

32 OTU

A/c Mk II Aug 41 to 44
Mk IIIA Aug 41 to 44
Base Patricia Bay

RCAF Bombing & Gunnery Schools operating Lysanders

No.1, Jarvis, Ontario; No.2, Mossbank, Saskatchewan; No.3 MacDonald, Manitoba; No.4 Fingal, Ontario; No.5 Dafoe, Saskatchewan; No.6, Mountain View, Ontario; No.7 Paulson, Manitoba; No.8 Lethbridge, Alberta; No.9 Mont Joli, Quebec and No.31 Picton, Quebec.

Lysanders in RCAF service from 1939 to 1946

Serial	Amount	Mark	Notes
416-490	75	II	Constructed by the NSCC
	700	1	II
Pattern aircraft; ex-R2047			
1536-1592*57		III TT	Ex-RAF
machines transferred to RCAF from 1942			
2305-2454 150		IIIA	Constructed by Victory Aircraft

*These ex-RAF aircraft were: P1728 (1578); V9281; V9285; V9290; V9294; V9298; V9300; V9301; V9306; V9307; V9312-V9315; V9317; V9318; V9320; V9323; V9324; V9327; V9329; V9351; V9352; V9354; V9355; V9357; V9358; V9365; V9366; V9368; V9370; V9371; V9374; V9378; V9383; V9386; V9404; V9407; V9409; V9412; V9413; V9415; V9416-V9419; V9422; V9423; V9425; V9432; V9442; V9443; V9446; V9449; V9476; V9477; V9480; V9481; V9486; V9501; V9502; V9504; V9508; V9509; V9518-V9521; V9539; V9546; V9552-V9554; V9556; V9570; V9577; V9582; V9589; V9607; V9613; V9642; V9643; V9645; V9647; V9651-V9653; V9676; V9678; V9712; V9713; V9716; V9719; V9730-V9734; V9739; V9746; V9747 & V9750

The second unit to be formed in 1941 was created from scratch at Croydon on August 12, 1941. 414 (Sarnia Imperials) was initially equipped with the Lysander Mk III and the Tomahawk Mk I and Mk II. Both were ultimately replaced by the highly capable Mustang Mk I in June 1942.

The remainder of the RCAF's Lysander units were all formed in January 1942 and would remain at home in Canada. These were 121, 122 and 123 Squadrons, the latter operating as the School of Army Co-operation from Rockcliffe. Both 121 and 122 Squadron operated the Lysander Mk II TT until March 1944 while the Lysander was gone from the strength of 123 Squadron by June 1943.

Thanks to the amount of Lysanders built in Canada during the Second World War and the nature of their duties, there were more examples extant in that country than anywhere else in the world. The very last RCAF Lysander was not SOC until December 13, 1946. Several were released onto the civilian market during the late 1940s and at least half a dozen became crop sprayers. This post-war use combined with one individual's bulk buy has contributed greatly to why we have a reasonably healthy number of 'Lizzie' survivors today.



An RCAF armourer unloads the port .303in Browning machine of a Lysander Mk II at Rockcliffe. Via author

A busy scene as a RCAF Lysander is subjected to major maintenance which would have been conducted more frequently due to the harsh environment in Canada. Healthy production and a training role without any risk of enemy action resulted in more Lysanders being extant in Canada during the post-war period than any other country in the world.
Via Martyn Chorlton





AFRICAN SKIES

As early as 1936 the Air Ministry had planned to have a conservative force of Lysanders in the Middle East to replace the ageing Audax and Hardy. The numbers increased as war approached, the Lysander suddenly finding itself operating in one of the most hotly contested areas of airspace; the Western Desert. Owen Cooper outlines operations from September 1939 through to May 1941

Moderate expansion

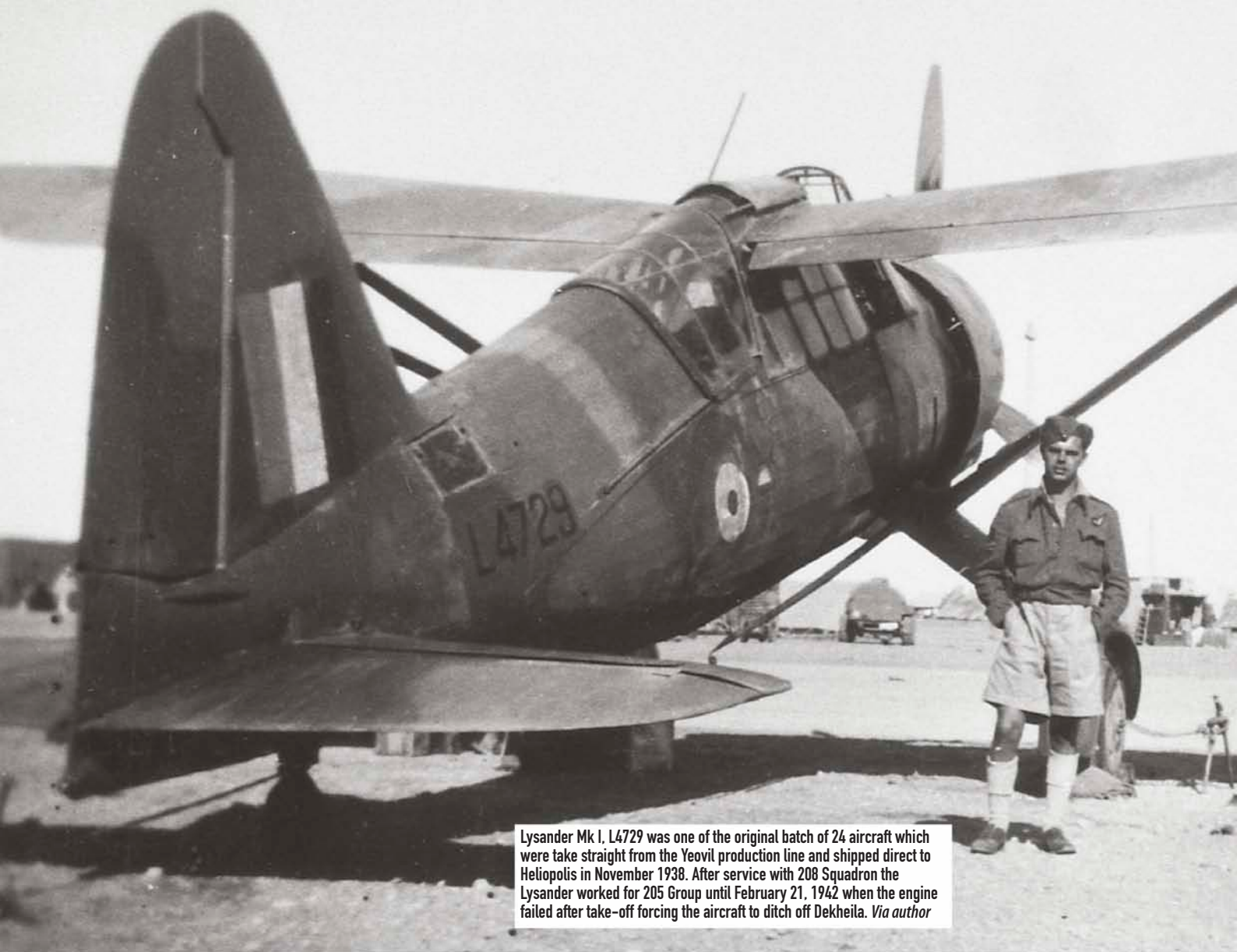
During the RAF's major expansion programme in 1936 the Air Ministry proposed that no more than 24 Westland Lysanders would be needed to cover the Middle Eastern region. The only Army Co-operation unit in the area at the time was 208 Squadron which was flying the Hawker Audax and had operated from Heliopolis since 1934. Twelve of the brand new Lysanders would be used to replace the Audax while the remainder would be held at an RAF depot at Heliopolis as a war reserve. The aircraft,

Lysander Mk Is, where serialled L4707 to L4730 and as they left the Yeovil production line they were placed straight into packing cases and shipped to Egypt, arriving in November 1938.

It was not 208 Squadron which flew the type first but a pair of pilots from 6 Squadron, a unit that was equipped with the Hawker Hardy at Ramleh in the British Mandate of Palestine. Trouble was brewing between the Arabs and the Jews in Palestine and 6 Squadron were called upon to evaluate if the Lysander would be suitable for the anti-

terrorist role. The two unidentified aircraft were tested by several 6 Squadron pilots over Christmas 1938, all of them returning favourable reports.

208 Squadron undertook conversion training from the Audax to the Lysander from December through to January 1939. Fully converted, the unit continued 'working up' into the spring of 1939 suffering its first Lysander loss on March 31 when Mk I, L4718 stalled during a message pick-up exercise and crashed without injury to the crew.



Lysander Mk I, L4729 was one of the original batch of 24 aircraft which were taken straight from the Yeovil production line and shipped direct to Heliopolis in November 1938. After service with 208 Squadron the Lysander worked for 205 Group until February 21, 1942 when the engine failed after take-off forcing the aircraft to ditch off Dekheila. *Via author*



A 208 Squadron Lysander Mk I, from the first delivery batch, visiting El Adem not long after 202 Group's initial successful strikes against an unprepared Italian enemy. *Imperial War Museum via author*

Increasing Lysander strength as war breaks

By mid-1939 it was obvious another world war was inevitable and despite the fact that the conflict would germinate in Europe the Air Ministry wisely decided to increase the number of Lysanders in the Middle East to 48 aircraft. This number was designed to cover the Lysanders already in service with 208 Squadron and the handful with 6 Squadron, which would take the type on in larger numbers from September 1939 alongside their original Hardys and several Gloster Gauntlet Mk I and Mk II fighters. Lysander Mk Is were already becoming plentiful at home as units such as 16 Squadron re-equipped with the Mk II and as a result a large number of 'second-hand' Mk Is were transferred to the Middle East.

When the war began 208 Squadron were expecting to be recalled to the European Theatre but the Commander-in-Chief, RAF Middle East, Air Marshal Sir William Mitchell stepped in to stop it from happening. Having already trained intensely with the 7th Armoured Division (The 'Desert Rats'), Mitchell correctly argued that 208 Squadron should remain with the unit they had already exercised with in an environment where the usefulness of army co-operation was fully appreciated. 6 Squadron were also of the same mind set, thinking that they would be returned to operate in Europe, but like 208 Squadron they were destined to remain in theatre for the entire war and beyond.

Allies flex their muscles

The war began quietly for the Allies throughout North Africa and the Middle East with forces concentrating on conducting exercises in preparation for the inevitable contact with the enemy, which by May 1940 was still only the Germans. Between May 7 and 17, 1940 a very large-scale Nile Delta Defence Exercise was performed in Egypt. On May 22 one of the largest 'RAF show of strength' exercises took place when a formation of 72 Blenheims, 63 Gladiators, ten

Sunderlands and 21 Lysanders flew over Giza, Cairo and the Abdin Palace before breaking up over Heliopolis. This flypast was clearly an indication that the RAF in the region was ready for action and suspicions were already in place that the Italians could enter the war on the side of the Germans depending on how quickly the latter would sweep through Europe. Mussolini saw his chance when France fell and on June 10, 1940 Italy finally showed its hand and declared war on Britain. This was two years earlier than Mussolini had originally planned and while the British were more than ready to begin moving their forces west, the Italians were far from ready to begin an assault to the east.

202 Group into action

The commander of 202 Group, Air Cdre Raymond Collishaw, did not waste any time and rather than waiting for the Italians, he ordered an attack on enemy airfields using Blenheims from 45, 55, 113 and 211 Squadrons escorted by the Gladiators of 80 and 112 Squadrons. Collishaw's remaining assets in the region were the Bombay transports of 216 Squadron and 208 Squadron's Lysanders. Well versed in desert

operations 208 Squadron was a mobile force and its war role saw the ground elements of the unit divided into a pair of echelons. The first comprised over 30 Ford two-ton and three-ton trucks loaded with enough supplies to support the entire squadron for seven days. The second echelon was made up of six-wheel Fordson and Crossley trucks loaded with tents and maintenance equipment and could also serve as a supply column should the squadron need to operate longer from its home base.

208 Squadron began operations by reporting on enemy positions but this type of sortie would need a fighter escort if the Lysander was to have any longevity in the region. These sorties were often expensive as losses were incurred by Lysanders and their escorting fighters, such as on June 22 when a Gladiator was shot down by a Fiat CR.42. But every now and then a Lysander would become the attacker, one example being on July 28 when a single aircraft was looking for a missing 11th Hussars patrol. En-route the Lysander crew spotted an Italian aircraft landing in the desert to assist another which had force landed east of El Adem. Swooping down, the pilot of the Lysander strafed with



6 Squadron operated the Lysander on two separate occasions, first from September 1939 to June 1941 and then from August 1941 to January 1942. It was during the latter period that Mk II, P9073 saw service until it was lost in action on December 13, 1941. *Via author*



his front guns and then banked to give his gunner a chance to hit both of the Italian machines. As the Italians scattered into the desert the persistent Lysander crew managed to set both enemy aircraft alight before returning to their original task.

Several ferocious dogfights took place between escorting Gladiators and attacking CR.42s during August 1940 and while the biplane fighters were suffering losses the Lysander generally managed to make their escape. Only one 208 Squadron Lysander was lost during the month when Mk I, L4685 suffered an engine failure on August 29.

Operations stepped up a gear when the Italian ground forces began to push out from Libya on September 13 and additional aircraft had bolstered their air force. While only one Lysander, Mk I L4711, was damaged by flak and damaged beyond repair after force landing during the entire month, October 1940 saw 208 Squadron's attrition rate begin to increase. On October 15 two aircraft, Lysander Mk Is, L4714 and L4717, were brought down by CR.42s, the former near Giarabub and the latter on the Libyan border. One of these two aircraft suffered 208 Squadron's first fatal casualties when Plt Off D M B Druce and Sgt J F Muldowney were killed. On October 16 a third Lysander Mk I, L4686, was shot down by CR.42s near Maktila. This intensive period of activity continued into November 1940 beginning with the loss of



6 Squadron operated the Lysander Mk I from September to December 1939 and again, including the Mk II, from February 1940 to July 1941. *Andy Hay/www.flyingart.co.uk*

another Lysander at Siwa following a bombing raid by 18 SM.79s which destroyed one aircraft, L4721, and damaged several others.

Bolstering Army Co-operation

208 Squadron's workload began to ease through November 1940 aided by the unit's 'C' Flight being re-equipped with the Hawker Hurricane for tactical reconnaissance work, although the Lysander would remain with the unit until May 1942. 3 Squadron, RAAF also arrived in theatre with one of its flights equipped with Lysanders and 6 Squadron, still located in Palestine, was preparing to move to the Western Desert. 6 Squadron had 13

Lysanders, two Gauntlets and a single Hardy on strength when 'C' Flight was ordered to move to Qasaba in Egypt for operational training. 'A' and 'B' Flights of 6 Squadron remained in Palestine where they were busily employed flying coastal anti-submarine patrols and army co-operation duties with the Arab Legion.

6 Squadron's 'C' Flight joined the fray from early October 1940 through to December when 'B' Flight took over. Not long after, 6 Squadron suffered its first casualties when Lysander Mk II, L6877 went missing during a reconnaissance sortie to Fort Maddalena; Flt Lt D T St. H Davies and Sgt R Chantry were believed to have been buried next to the wreck of their aircraft.



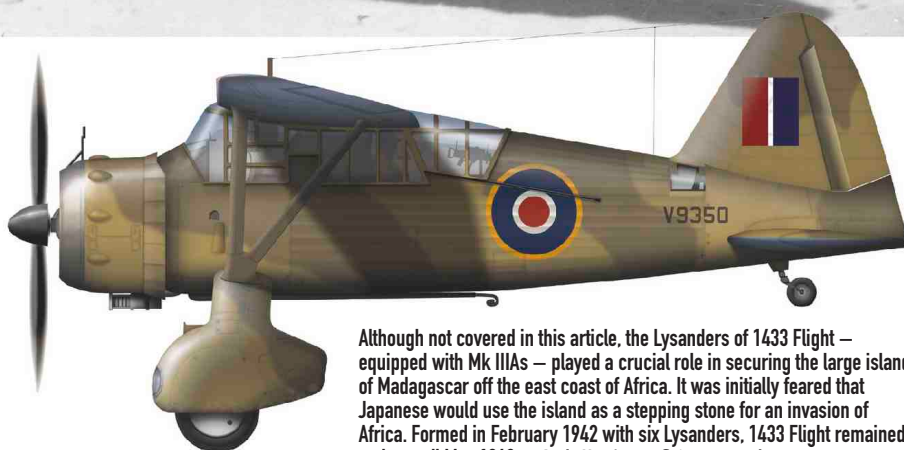
267 Squadron was reformed at Heliopolis on August 20, 1940 from the Heliopolis Communications Flight. The squadron flew an incredible range of aircraft which even included enemy machines and of course the Lysander Mk I and Mk II. This is Mk II, P9191 which only served with 267 Squadron, at El Kabrit on February 10, 1943. The Lysander served the squadron until June 1945. *Via author*

Another, unnecessary, loss was caused by a lack of supply dropping equipment on February 9, 1941 when 6 Squadron's Lysander Mk II, P9188 was called up to look for a missing tank after a skirmish near Mersa Matruh. Forced to land near the tank, the Lysander hit a cairn on landing which wrecked the undercarriage.

Supporting Greece

During February 1941 the number of Lysanders in theatre reduced when 208 Squadron was withdrawn to Greece when Italian forces invaded from neighbouring Albania. 208 Squadron's tasking was transferred to 'A' and 'B' Flights of 6 Squadron which was now operating from Tobruk under direct control of HQ, 202 Group. The squadron's own HQ and 'C' Flight were also moved from Palestine to Heliopolis.

During March 1941 'A' Flight of 6 Squadron began to receive the Hurricane at Agedabia while 'B' Flight retained its Lysanders at Barce which had been home since February 24. The arrival of Gen Erwin Rommel in North Africa temporarily changed the dynamic and a tactical withdrawal of British and Commonwealth troops was ordered until forces were built up again. Lysanders played an important role as Tobruk quickly became besieged by the enemy during April and May 1941. As well as artillery spotting the Lysanders still continued



Although not covered in this article, the Lysanders of 1433 Flight – equipped with Mk IIAs – played a crucial role in securing the large island of Madagascar off the east coast of Africa. It was initially feared that Japanese would use the island as a stepping stone for an invasion of Africa. Formed in February 1942 with six Lysanders, 1433 Flight remained active until May 1943. *Andy Hay/www.flyingart.co.uk*

to fly long-range tactical reconnaissance sorties including one on April 9 whilst operating from El Gubbi West. During this particular sortie, flown by Plt Off J E McFall with Cpl Copley as air gunner, they shot down a Junkers Ju 52.

Final fling from Tobruk

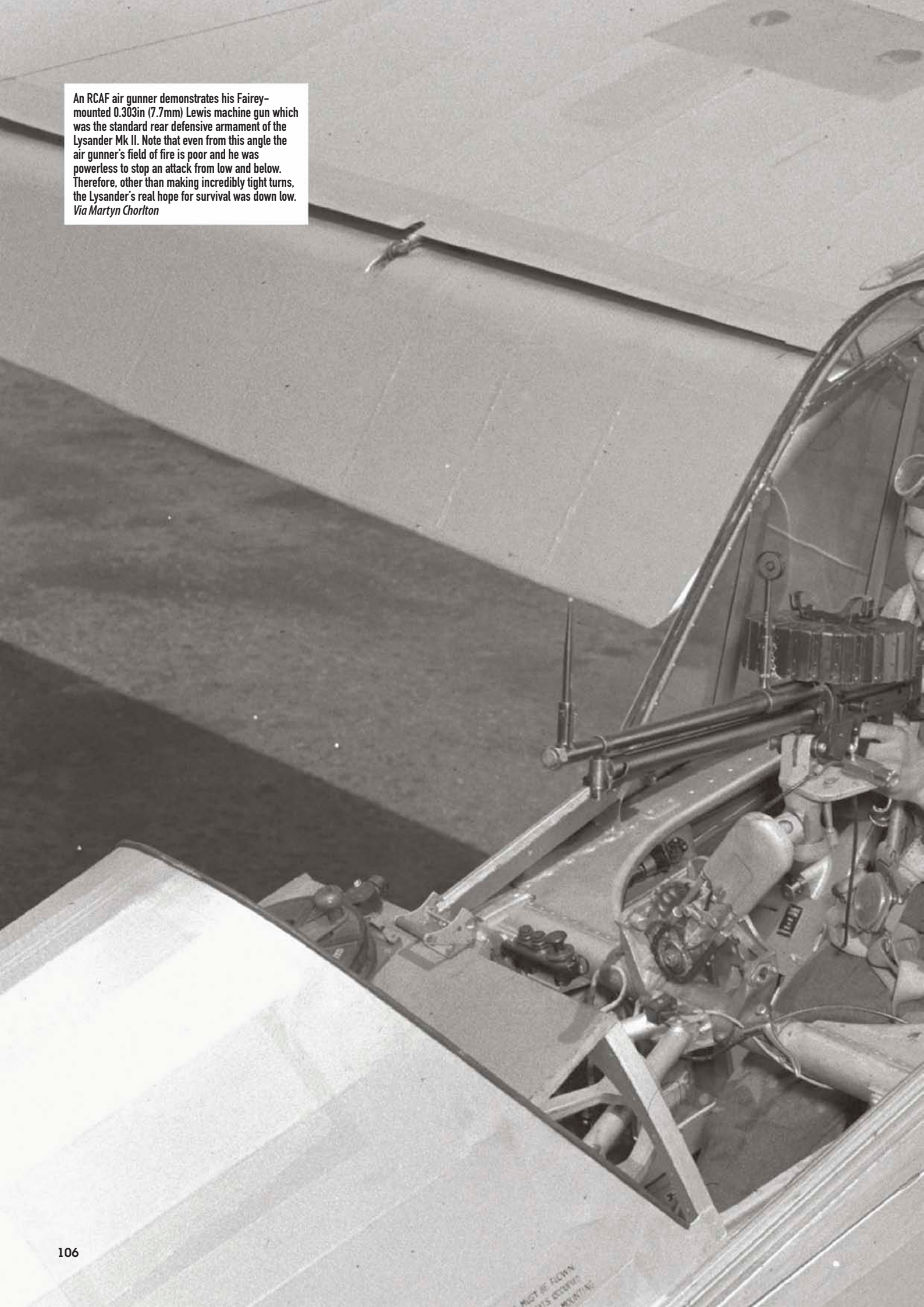
The main German and Italian ground assault on Tobruk came on April 11 followed by waves of enemy aircraft from April 14 onwards which were greeted by a depleting number of 73 Squadron Hurricanes. Barce came under regular attack by the Luftwaffe during this period and on April 22 Mk IIs, L6875 and L6876 were both destroyed when the airfield was evacuated. From April 25 the

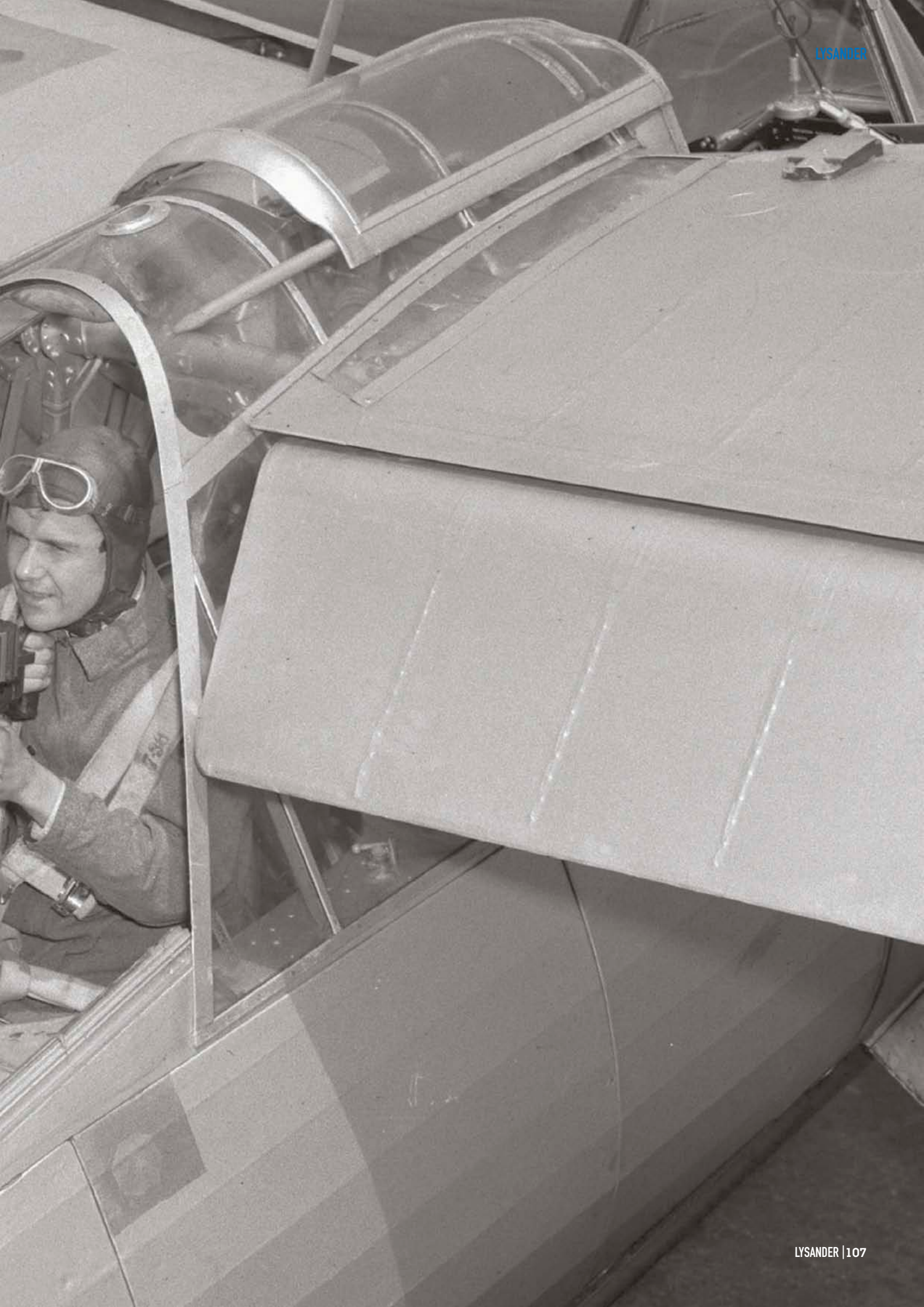
remaining four serviceable Hurricanes of 73 Squadron were flown out of Tobruk leaving just 6 Squadron with a handful of Lysanders, Hurricanes and a single Magister.

Regular air attacks made operations impossible and on May 19 the remaining four 6 Squadron Lysanders were withdrawn along with Magister. The small formation was fired on by its own anti-aircraft guns as they crossed Tobruk harbour but all reached Maaten Bagush safely.

From June 1941, 6 Squadron became an all-Hurricane unit and the operational days of the Lysander came to an end. However, the 'Lizzie' would always have a secondary role to play in the desert right up to the end of the war. ❖

An RCAF air gunner demonstrates his Fairey-mounted 0.303in (7.7mm) Lewis machine gun which was the standard rear defensive armament of the Lysander Mk II. Note that even from this angle the air gunner's field of fire is poor and he was powerless to stop an attack from low and below. Therefore, other than making incredibly tight turns, the Lysander's real hope for survival was down low.
Via Martyn Chorlton





THE 'LIZZIES' FINAL VICTORY

During the complex period of the Arab-Israel War of 1948, Egypt's Air Force still had a handful of its pre-Second World War Lysanders on strength. Remarkably they still had a role to play as David H Smith relates.

The Royal Egyptian Air Force (REAF)

Established in 1939 the REAF, having broken away from Army control, began its modernization programme by ordering 18 brand-new Lysander Mk Is serial Y500 to Y517 and one ex-RAF machine, R2650, which was re-serialled Y518. A twentieth and final Lysander, ex-RAF Mk III, R9000, was also acquired by the REAF but does not appear to have gained a local serial.

The new Lysanders entered service with 1 (General Purpose) Squadron at Almaza on the edge of Cairo which was also occupied by the RAF's 208 Squadron. After conversion training, aided by the RAF, 1 Squadron was redesignated

as an Army Co-operation unit. By the end of January 1939 the unit was declared operational under the command of Sqn Ldr Salih Mahmud Salih, a position he would hold throughout the majority of the Second World War.

Controlled by British forces at the outbreak of the war, 1 Squadron carried out its Army Co-operation duties effectively throughout the region and all 18 Lysanders remained serviceable until conditions began to take their toll by late 1940. As serviceability began to suffer it was probably around this period that the two additional ex-RAF machines were allocated to the REAF to keep the small force going. By late 1942 the REAF Lysanders were down to 14 which, incredibly, continued in

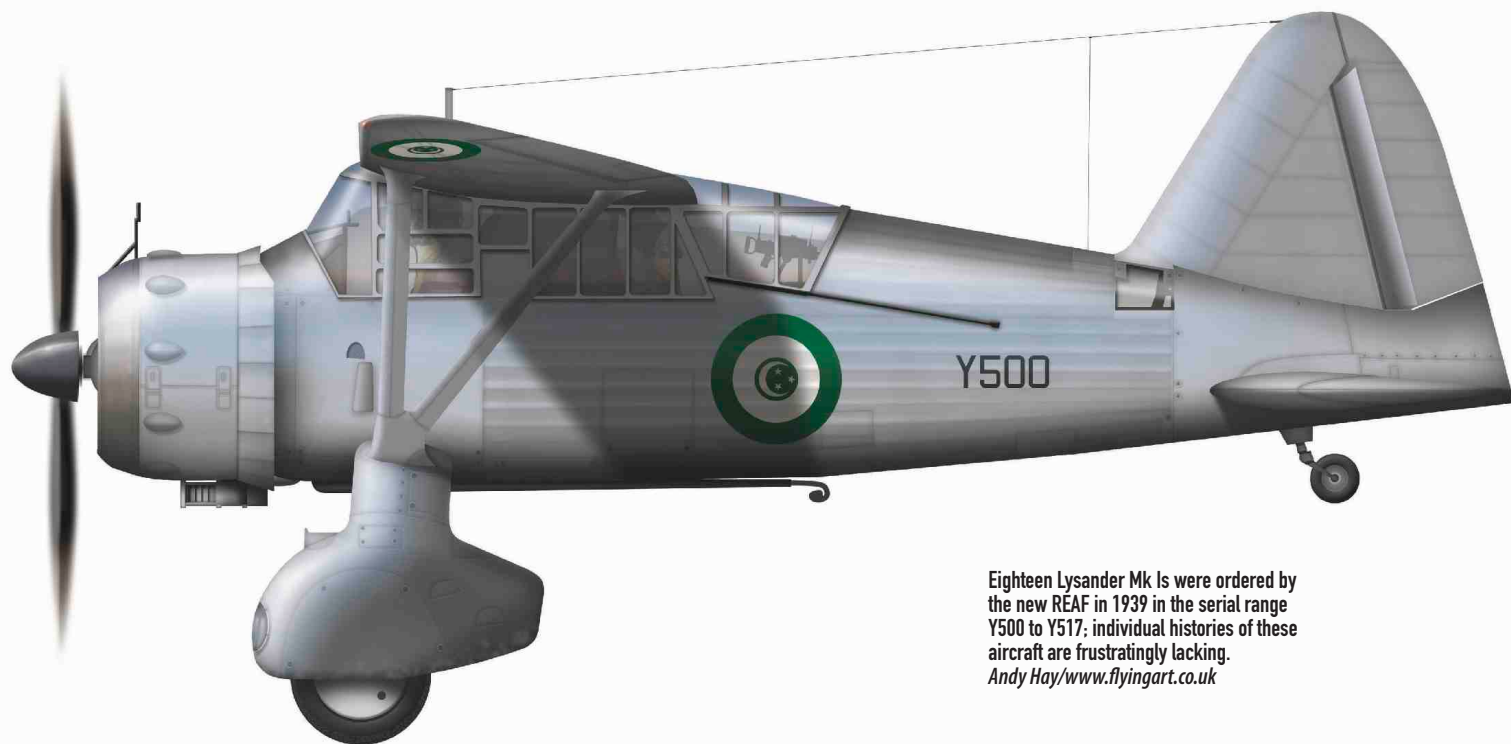
service until 1945, although they were only good for target towing and searchlight co-operation duties. By 1944, 1 Squadron had begun to re-equip with ex-RAF Hurricanes while the last Lysanders on strength took part in convoy protection exercises, but two were retained as hacks into 1945.

The Arab-Israeli War

While the war in Europe had finally come to end, peace was destined only to rein for a short period as relations with Britain began to deteriorate and disputes over the frontier of Palestine also increased. For good reason the REAF kept hold of as many aircraft as possible and by early 1946 thirteen Lysanders were still ➤

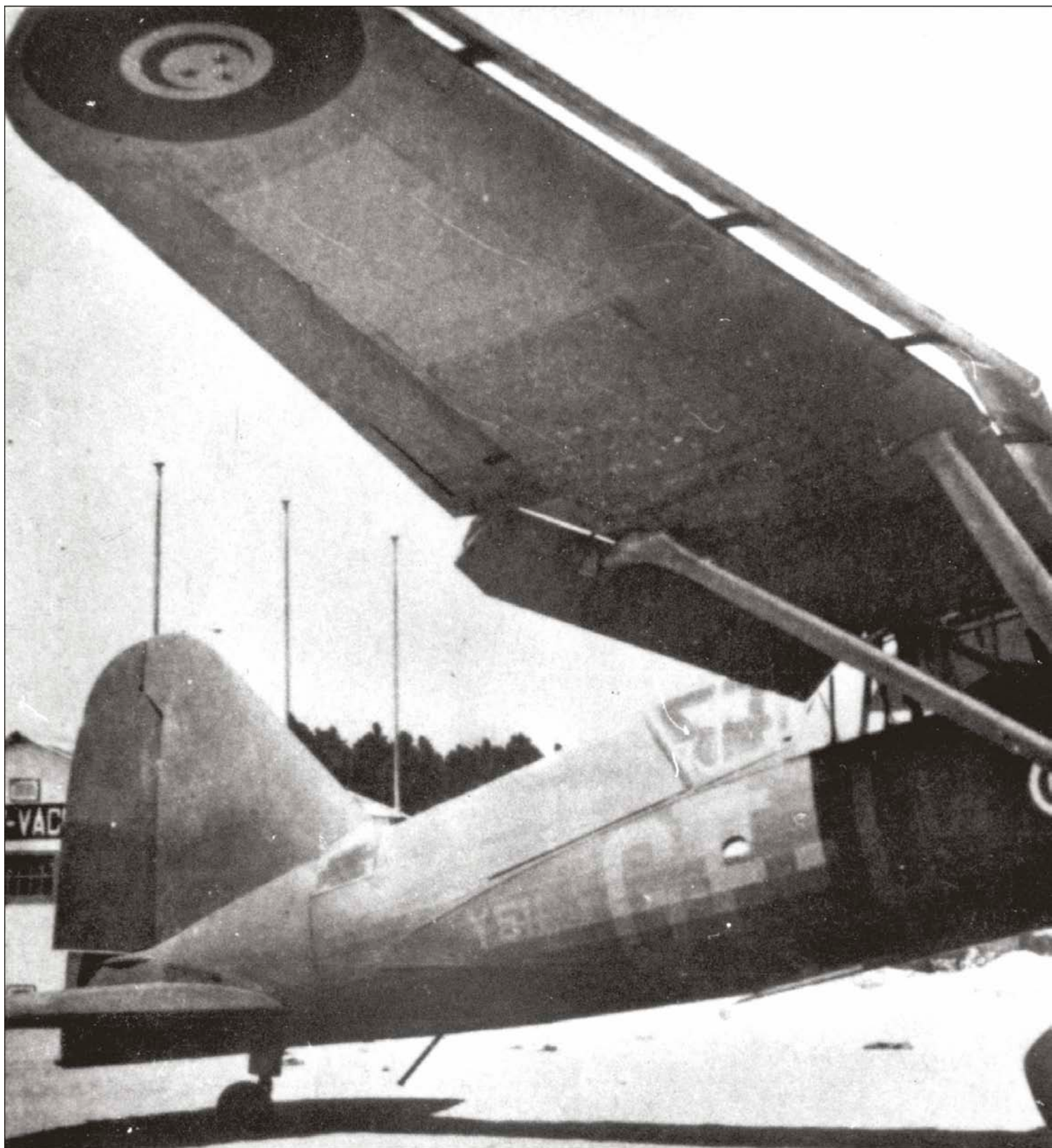
The shiny new Lysander Mk Is of 1 (Army Co-operation) Squadron, REAF on parade for inspection by the director of the air force, Brig Ali Islam Bey. The British described Bey as 'pleasant but totally ineffective' while 1 Squadron's commander, Sqn Ldr Salih Mahmud Salih, was applauded as an 'outstanding officer'. *Via author*





Eighteen Lysander Mk Is were ordered by the new REAF in 1939 in the serial range Y500 to Y517; individual histories of these aircraft are frustratingly lacking.
Andy Hay/www.flyingart.co.uk





recorded on strength. Nine of them were deemed beyond economic repair and were scrapped between October 1946 and January 1947 while the remaining four were selected for overhaul and brought back up to an airworthy condition. All four were later attached to the REAF Royal Flight which became the nucleus for 3 (Communications) Squadron. In the meantime the original Lysander unit, 1 Squadron was re-equipped with the Spitfire LF.IX from early 1947.

As trouble began to build in the region the

REAF realised that it had a very limited photographic-reconnaissance capability and it was decided that two of the surviving Lysanders would be converted to this role in early 1948. Keeping these two machines serviceable seems to have been quite a challenge, but this was not the only problem that faced the REAF. Only a handful, if any, REAF officers were actually trained as photographic interpreters and no mention is given about processing and printing support.

The first phase of the Arab-Israeli War began

on May 15, 1948; the previous day, following the termination of the British Mandate of Palestine, David Ben-Gurion had declared a new Jewish State to be known as the State of Israel. The initial phase was over by June 11 resulting in a truce (the first) which would last until July 8; whether the REAF's small Lysander force flew any sorties is not known, but one had an amazing encounter with a 101 Squadron, Israeli Air Force Avia S-199 (aka C.210; effectively a Messerschmitt Bf109G powered by Junkers Jumo engine) on July 9, 1948.

Only 20 Lysanders entered service with the REAF, the first arriving in 1939. Numbers had reduced to 14 by 1942 but were maintained at that level until 1945. The post-war survivors were reduced by another nine while four were refurbished and pressed back into service by 1947/48. *Via author*



Bob Vickman joined the USAAF in 1943 and served with a photographic-reconnaissance unit in the Pacific Theatre until the end of the Second World War. Vickman was one of many Jewish Americans who volunteered to join the new Israeli Air Force and after training in Czechoslovakia he joined 101 Squadron in early June 1948. His death remained a mystery to the Israelis until Air Cdre Muhammad Abd al-Munaim Miqaati's account was published many years later. *Via author*

can drop like a stone to land in a field, like they did when the RAF took spies in and out of France. The Israeli must have been concentrating on keeping me in his sights because he dropped his nose to follow. He overshot and went right in, almost level with me. I honestly felt sick in my stomach and, I don't know why, I saluted him. Then we flew straight back to Cairo."

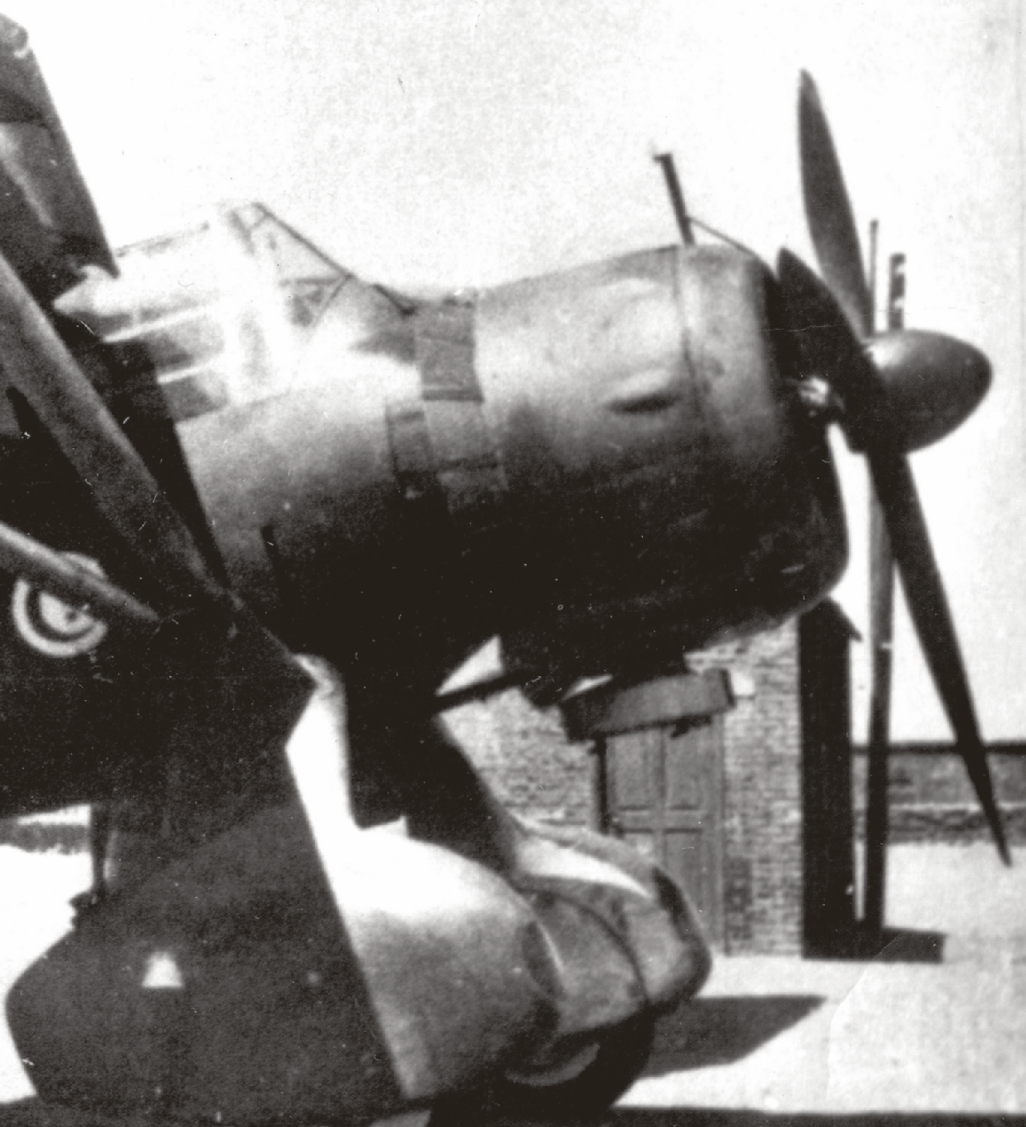
For the Israelis the loss of one of its aircraft and its pilot day was a mystery. The loss of the pilot, Bob Vickman, an American born in Hollywood, California was a huge blow to the fledgling 101 Squadron which had only been formed with its Czech-Built S-199s in May 1948. Not long after Vickman's loss, it was discovered that the twin upper fuselage machine-guns of the unit's S-199s had not been properly synchronised and as a result when they were fired the propeller would either be badly holed or even shot away. One theory to explain the American pilots plunge into the sea was that he accidentally shot away his own propeller as the gunner of the Lysander never made any claim to actually shooting down the fighter. However, not taking anything away from Miqaati's flying skills, the incredible low speed that a 'Lizzie' could achieve would not have been something Vickman would have come across before.

This incident was possibly one of the last flings for the Lysander in combat and by October 1948, 3 Squadron had no Lysanders remaining on strength and only a single aircraft was recorded as being serviceable at Almaza in January 1950. It is possible that this unidentified Lysander was one of several historic aircraft planned for a new air museum which never came to fruition because of the Egyptian 1952 Revolution. Unfortunately, most of the REAF's early aviation was destroyed by the RAF during the Suez campaign in 1956 making this particular Lysander also the last to be destroyed by 'enemy' action. ❖

Enemy encounter

A single Lysander, flown by one of the first three pilots to serve with the REAF, Air Cdre Muhammad Abd al-Munaim Miqaati was detailed to fly from al-Arish to Cairo-Almaza. The war was now in its second phase which was destined to be over by July 18 and is traditionally known as the Ten Day War. Miqaati takes up the story of that day's remarkable sortie, "It was Condition Red. I had been advised to keep the radio on, but I was still nervous as I set across the Mediterranean. Fortunately my

gunner – I don't remember his name – was a keen-sighted man and he spotted an Israeli Messerschmitt as it manoeuvred into position to attack. Of course, my Lysander was a very old kind of airplane, but I'd flown these for a long time. Still, we were at a big disadvantage and you'd expect such a contest could only end one way... The pilot of the Israeli aircraft came up behind us. I told my gunner to fire just as the Messerschmitt came into range and I went down to about 100ft. Then the gunner fired and I throttled right back. You know the Lysander





The Shuttleworth Collection's excellent Lysander strikes quite a pose since it has been painted in the all-black scheme of the clandestine 161 Squadron which operated the Mk IIIA from February 1942 (when it was formed at Newmarket) until June 1945 (when it was disbanded at Tempsford). *Darren Harbar*



ALIVE AND KICKING

Considering the early rate of attrition of the Lysander in RAF service, the type has done well from a preservation point of view although this is mainly thanks to our Canadian cousins.

The survivors at home

The best known Lysander in Britain at the moment is the only airworthy example in the country, operated by the Shuttleworth Collection at Old Warden in Bedfordshire. Originally built in Canada by Victory Aircraft as a Mk III and serialled 2355, this Lysander originally served as a target tug. Post-war the Lysander was bought by ex-RCAF flying instructor and avid aircraft collector Wes Agnew, before it was purchased in a sorry state by Sir William Roberts, owner of the Strathallan Collection in Scotland. Registered as G-AZWT (which remains its official CAA registration to this day), the Lysander arrived in Britain in October 1971 and after many years of painstaking restoration returned to the air in December 1979 in the markings of 309 (Ziema Czerwieska) Squadron with the RAF serial V9441. G-AZWT was bought by the Shuttleworth Collection in 1998 and after further restoration work is a regular airshow performer and, today, is painted all black to represent a 161 Squadron machine operating out of Tempsford in 1942.

The first of two static Lysanders on public view preserved in Britain resides at the RAF Museum, Hendon in the shape of Mk III, R9125. This aircraft first joined 225 Squadron at Tilshead in September 1940 and today is resplendent in its original scheme. The aircraft enjoyed a busy career with the RAF, which culminated with 161 Squadron at Tempsford where senior personnel recognised the aircraft's significance and proposed that it be preserved. Very nearly scrapped in 1949 the aircraft beat the odds and, after many years of being displayed at a host of RAF events, the aircraft was moved to the RAF Museum in 1971.

Our next public view aircraft is Mk III, V9673 'MA-J', in 161 Squadron markings which is hanging from the roof of the Air Space Hall at the IWM, Duxford. Built in Canada as 1558 the aircraft was SOC in 1946 and was later recovered from a farm at Harris, Saskatchewan in 1973. The aircraft was acquired by the Musée Royal de l'Armée et d'Histoire Militaire, then by Graham Warner before it was purchased by the IWM in 1991.

Our final Lysander in Britain is currently under restoration by the Aircraft Restoration Company (ARC) at Duxford and is therefore out of the public eye. After RAF service with 225, 613 and 4 Squadrons this Lysander Mk IIIA, serialled V9312, was converted to a target tug Mk III TT standard and delivered to the RCAF, SOC by October 1946, in 1972 the aircraft was in the hands of Whereatt's Warbirds at Assiniboia, Saskatchewan. It was then acquired by Kermit Weeks for his Fantasy of Flight Museum between 1991 and 2002 but by 2003 was in the hands of the ARC.

'Lizzies' in Canada

Two beautiful airworthy examples of the Lysander exist in Canada beginning with Mk IIIA, 2363 (C-GCWL). This Lysander's history before 1983 is sketchy, but during that year the aircraft was acquired by Canadian Warplane Heritage (CWH) until 1988. It was then transferred to the 'Friends of CWH' in the USA and serialled N1274, where a lengthy restoration began. Transferred back to the ➤

Lysander, R9125 in No 225 Squadron colours, one of the first Lysanders to emerge post-war on display at the Royal Review, 50th Anniversary of the RAF at Abingdon on March 26, 1968. It is preserved in Hendon's Battle of Britain Experience Hall. *Mike Hooks*





Lysander Mk IIIA, V9281 at Booker on October 25, 1978 whilst under the ownership of Philip A Mann. *Via Martyn Chorlton*



CWH at Hamilton in 1996 restoration continued and in May 2009 the machine was back in the air.

Canada's second airworthy Lysander was built in 1942 as a Mk IIIA (c/n 1206) and today is displayed as 416, serving with 400 'City of Toronto' Squadron. Resplendent in an original silver dope finish this outstanding machine is operated by Vintage Wings of Canada and first returned to the air on June 18, 2010 from Gatineau, Quebec.

The next most significant aircraft located in Canada was actually restored to flight back in the 1960s. A composite of three different Lysanders, the aircraft was restored as a Mk II and serialled R9003 as part of a Centennial project in 1967. It is known that the fuselage was built at Yeovil while the wings were constructed by the NSCC at Malton. It was first flown on December 29, 1967 by Capt Bernie Lapoint in the colours of 110 Squadron which the original R9003 first

Lysander Mk IIIA, N7791 (actually ex-RCAF 2346) in the 1970s when it was briefly returned to airworthy condition before it was donated back to the Smithsonian. *Via Martyn Chorlton*

joined back in 1940. After a series of demonstration flights across western and central Canada the aircraft was donated to the Canada Aviation and Space Museum in September 1968 and, sadly, was last flown in October 1970.

Further museum examples in Canada include Mk II, 2349 at the Canadian Museum of Flight at Langley which was restored for EXPO 1986 and is currently displayed without the majority of its fabric to expose the structure. Another machine in the public eye is 2375 which is on display at the Commonwealth Air Training Plan Museum at Brandon.

The following seven airframes are known to exist in Canada; three of them, 2341, 2344 and 2381 belonged to the late Ed

Zalesky and are presumably in private storage. 2364 is being used for spares for the CWH Lysander; 2367 and 2446 are in private hands and 2376 is believed to be owned by the Canadian Museum of Flight.

The rest of the world

Beginning with the USA, the most significant Lysander is currently owned by Kermit Weeks and today can be seen at the Lakeland/Linder Regional Airport in Florida. The ex-RCAF machine (c/n 1244) was bought by Wes Agnew during the post-war period and later ended up the hands of Joe Gertier who shipped the aircraft to New York during the 1960s. It was then purchased by Philip A Mann and was restored to flight between 1971 and 1974 from components donated from ex-RCAF aircraft, 2341, 2349 and 2391. Flown on March 1, 1974 the aircraft was sold to Doug Arnold of Warbirds of GB Ltd at Blackbushe in 1979 and was seen regularly with the serial V9281 until August 21, 1983 when the aircraft force landed and overturned. Between 1985 and 1989 the aircraft was in the hands of Brian Woodford of Wessex Aviation & Transport at Henstridge, but was rebuilt at Booker and re-flown again on September 19, 1987. The Lysander was then sold to Kermit Weeks in the late 1990s and is presumed to have been kept in a 'near-airworthy' state ever since.

The only other Lysander on public display in the USA is another ex-RCAF machine which was liberated by Ernie Simmons post-war. This Mk IIIA was then acquired by Dwight Brooks and registered as N7791, but was donated to the Smithsonian Institute in 1979 and then loaned to the USAF Museum at Dayton the same year. Back with the Smithsonian in 1997 the aircraft was put into storage at Silver Hill but on February 11, 2005 the aircraft

V9545 during the 1980s whilst wearing the 'RM' code of the RCAF's 414 (Sarnie Imperials) Squadron which operated the Mk III between August 1941 and June 1942. *Via Martyn Chorlton*



returned to the public gaze in the markings of 138 Squadron. Today the Lysander can be seen at the Smithsonian Air and Space Museum in the Udvar-Hazy Center. One other unidentified ex-RCAF Mk IIIa is in the hands of the Bristol Heritage Collection in Nashville.

Back in Europe the bulk of Lysander activity was taking place in Belgium with Mk III TT, OO-SOT which flew for many years on the airshow circuit from the 1980s through to 2001. Delivered to the RCAF in 1942 as V9546, the aircraft was another post-war Wes Agnew purchase, but on this occasion the Lysander was purchased by the Musee Royal de l'Armee in Brussels in 1971. Tucked away in storage until 1982, the aircraft was taken on by the Sabena Old Timers who initiated a restoration at Saffraanberg AB which later moved to Brustem AB. Airworthiness standard was achieved thanks

Once a regular on the European airshow circuit Lysander Mk IIIA, OO-SOT aka 2442 was grounded for good when, on June 17, 2001, the aircraft crashed at Brussels after ground looping on landing. *Via Martyn Chorlton*





to components from ex-RCAF 2341, 2360 and 2442 and on August 27, 1988 OO-SOT was back in the air. Unfortunately the aircraft was damaged in a forced landing near Florennes AB in September 1988 and suffered more serious damage in a second incident at Brussels in July 2001, which brought this Lysander's flying career to an end. Restored back to static standard the aircraft can be seen in the Musee Royal de l'Armee.

Our final Lysander is yet another ex-RCAF machine, Mk III TT serialled 1589, which was originally put aside by the RCAF for restoration straight after the war. Stored in the Canadian National Aeronautical Collection at Rockcliffe between 1965 and 1967 the aircraft was swapped for an ex-IAF B-24 Liberator and delivered to the Indian Air Force Museum at Palam, New Delhi where it remains to this day. ❖



Lysander Mk III, V9441 in 1979, after its long restoration was completed at Strathallan. This aircraft spent several years in the markings of 309 (Zima Czerwieska) Squadron and was given the RAF serial V9441.
Via Martyn Chorlton

Now a static exhibit in the Canada Aviation and Space Museum, this Lysander Mk II was restored to flight as a composite and serialled R9003 to represent a 110 Squadron RCAF aircraft. It was first flown on December 29, 1967 by Capt Bernie Lapoint but was grounded by October 1970. *Aeroplane*





THE WESTLAND LYSANDER

Westland P.8 Lysander prototypes (Specification A.39/34). Two prototypes, K6127 (first flown 15/6/36) and K6728 (first flown December 11, 36). K6127, after being brought up to production standard, was experimentally fitted with two 20 mm. Oerlikon guns on the undercarriage in 1940, and later modified with tail (dummy) turret and Delanne tandem wing. K6128 to Middle East and India for tropical trials, 1938-39.

Westland Lysander Mk I (Specification A.36/36). 169 aircraft with 890hp Bristol Mercury XII engines. L4673-L4738, P1665-P1699, R2572, R2575-R2600 & R2612-R2652. R2650 to Royal Egyptian Air Force. Converted to TT Mk Is: R2572, R2575, R2578, R2581, R2587, R2588, R2589, R2591, R2593, R2594, R2597, R2598, R2632 & R2638. Converted to TT Mk IIs: P1666, P1668, P1680, P1681, P1683, R2651 & R2652.

Westland Lysander Mk II. 442 aircraft with 905hp Bristol Perseus XII engines. L4739-L4816, L6847-L6888, N1200-N1227, N1240-N1276, N1289-N1320, P1711-P1745, P9051-P9080, P9095-P9140, P9176-P9199, R1987-R2010, R2025-R2047: also 3101-3136 of the Turkish Air Force, 61-66 of the Irish Air Corps, and '01' of the Armee de l'Air. L4798, L6869, N1208, N1248, N1300, P1713, P1735, P1736, P1738, P9059, P9078, P9102, P9103, P9134, P9181, P9184, R2036, R2039, R2040, R2043, R2045, R2046 transferred to the Free French Forces. P9105 fitted with Blackburn-Steiger high-lift wing. Modified to TT Mk IIs: L6867, N1289, N1320, P9099 & R1998. Converted to TT Mk IIs: N1289, N1320, P1715, P9109, P9110, P9111, P9113, P9114, P9115, P9117, P9123, P9125, P9126, P9128, P9130 & P9133. R2047 as pattern aircraft to Canada, January 1940.

Westland Lysander Mk II (Canadian licence-built). 75 aircraft with 905hp Bristol Perseus XII engines. 416-490 (438-440 became DG44J-DG447). Westland Lysander Mk III. 100 aircraft with 870hp Bristol Mercury XX engines. R8991-R9030, R9056-R9079, R9100-R9135. R8991-R8999 to Finland; R9000 to Egypt.

Westland Lysander Mk III. 250 aircraft with 870hp Bristol Mercury XX engines. T1422-T1470, T1501-T1535, T1548-T1590, T1610-T1655, T1670-T1709, T1735-T1771. Converted to TT Mk IIs: T1445, T1450, T1453, T1456, T1458, T1461, T1532, T1534, T1571, T1583, T1616, T1623, T1626, T1633, T1642, T1674-T1679, T1688, T1692, T1699, T1746, T1750, T1752 & T1763. To Admiralty charge: T1570 as TT Mk II; T1739 used for B.O.A.C. crew training.

Westland Lysander Mk III. 17 aircraft built by Westland (Doncaster) Ltd. W6939-W6945, W6951-W6960. A further 483 aircraft between W6675 and VV6938, and between W6961 and W7241 were cancelled. Westland Lysander Mk III (Canadian licence-built). 150 aircraft with 870hp Bristol Mercury 30 engines. 2305-2454.

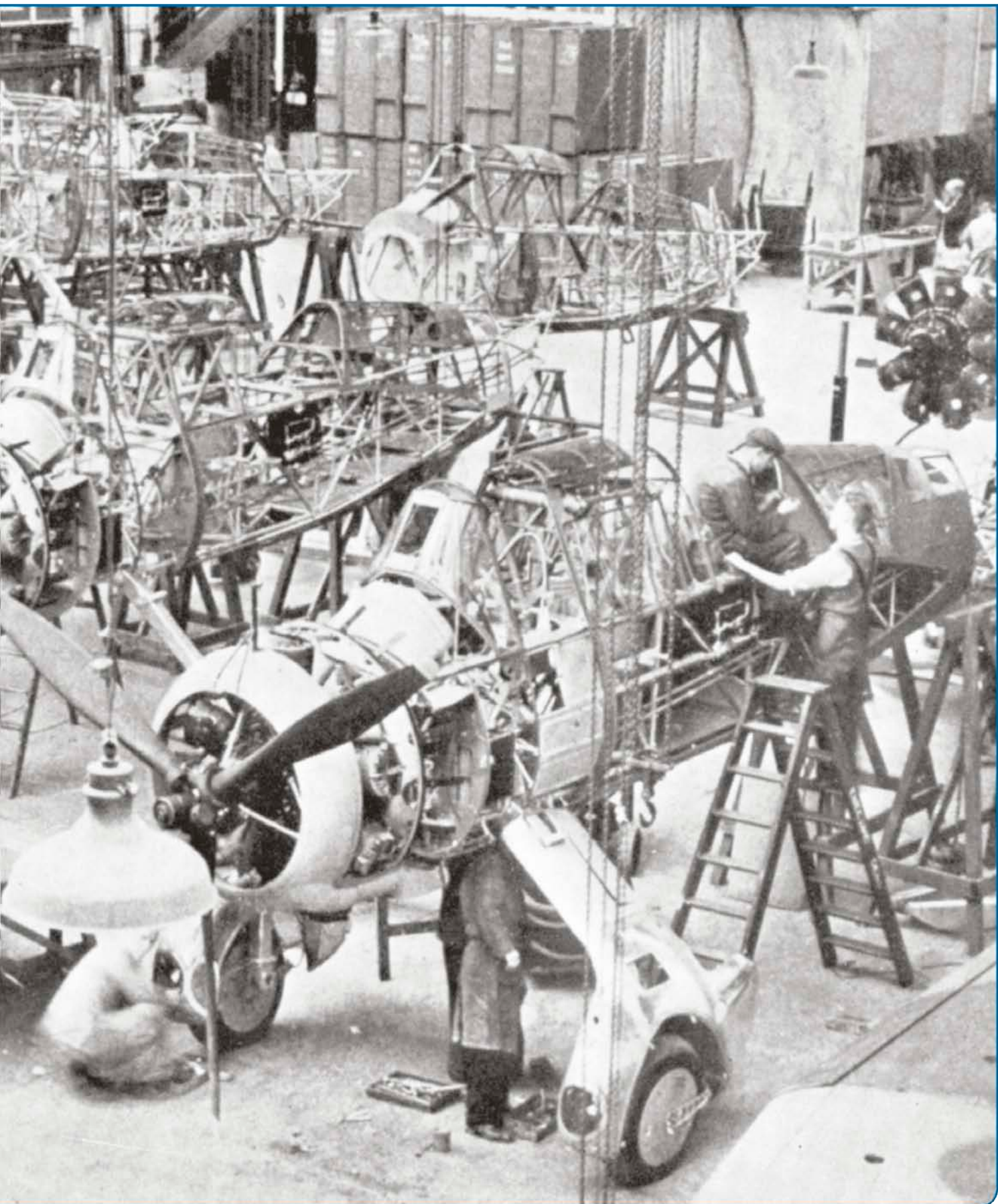
Westland Lysander Mk IIIA. 347 aircraft with 870hp Bristol Mercury 30 engines. V9280-V9329, V9347-V9386, V9401-V9450, V9472-V9521, V9538-V9557, V9570-V9619, V9642-V9681, V9704-V9750. V9506, V9583 and V9741 to USAAF. V9614 supplied to Free French Forces. V9372, V9579, V9679 and V9726 converted to tow gliders. Supplied to Portugal: V9309, V9321, V9363, V9439, V9555, V9594, V9705 & V9729.

Westland Lysander TT Mk IIIA. 100 aircraft with 870hp Bristol Mercury 30 engines. V9751-V9753, V9775-V9824, V9844-V9868 & V9885-V9906.

Total Lysander production: two prototypes plus 1,650 production aircraft (1,366 delivered to the RAF)



PRODUCTION SUMMARY



A trio of Bristol Perseus XII-powered Lysander Mk Is are put through their paces for the camera in 1938. Very few Lysander Mk Is were serving with operational squadrons at the outbreak of the Second World War with the exception of 16 Squadron which was re-equipped with the mark between May and September 1940. *Aeroplane*







HOME AND AWAY

Lysander service with the RAF, FAA and Foreign Air Forces* from 1938 to 1947

Royal Air Force

2 Sqn *Hereward*

A/c	Mk I	Jul 38 to Feb 40
	Mk II	Feb 40 to Sep 40
	Mk III	Sep 40 to Jul 42
Codes	KO & XV	

Bases Hawkinge, Abbeville/Drucat, Senon, Ronchin, Lubuissière, Wevelghem, Boulogne, Lypne, Bekesbourne, Hatfield, Cambridge, Sawbridgeworth, Firbeck, Weston Zoyland, Martiesham Heath, and Gatwick



T1631 'XV-H' was a Lysander Mk III which was delivered new to 2 Squadron in late 1940. Later converted to a target tug the aircraft served with 289 Squadron and 7 AGS; the latter until September 1940,

4 Sqn

In future videre (To see into the future)

A/c	Mk II	Dec 38 to Sep 40
	Mk III	Sep 40 to Jul 41
	Mk IIIA	May 41 to Jun 42
Codes	TV & FY	

Bases Odiham, Mons-en-Chaussée, Ronchin, Aspelaere, Clairmarais, Dunkirk, Detling, Ringway, Linton-on-Ouse and Clifton

6 Sqn

Oculi exercitus (The eyes of the Army)

A/c	Mk I	Sep 39 to Dec 39
	Mk II	Feb 40 to Jun 41

Code JV
Bases Ramleh, Qasaba, Siwa, Tobruk, Aqir, Heliopolis, Agedabia, Antelat, Msus, Marawa, Derna, El Gubbi East, El Gubbi West and Maaten Bagush,

13 Sqn

Adjuvamus tuendo (We assist by watching)

A/c	Mk II	Jan 39 to Jan 41
	Mk III	Nov 40 to Jul 41
Codes	AN & OO	

Bases Odiham, Mons-en-Chaussée, Flamicourt, Douai, Abbeville, Clairmarais, Châteaubriant, Bekesbourne, Hooton Park and Speke



16 Sqn *Operta Aperta (Hidden things are revealed)*
A/c Mk I May 38 to Apr 39
Mk II May 40 to Sep 40
Mk III Apr 39 to Nov 40
Mk IIIA Oct 40 to Jul 41
May 41 to Jul 42
Codes KJ, EE & UG
Bases Old Sarum, Hawkinge, Amiens, Bertangles, Lympne, Redhill, Cambridge, Okehampton, Weston Zoyland, Roborough, Tilshead, St Just, Bolt Head, Lee-on-Solent, Thruxton and Farnborough

20 Sqn *Facta non verba (Deeds not words)*
A/c Mk II Dec 41 to Apr 43
Code HN
Bases Begumpet, Peshawar, Chakulia, Jamshedpur, Tezpur, Dinjan, Feni, Imphal, Chittagong, Charra and Maungdaw

26 Sqn *N wagter in die Lug (A guard in the sky)*
A/c Mk II Feb 39 to Nov 40
Mk III Nov 40 to Jun 42
Codes HL & RM
Bases Catterick, Ronaldsway, Abbeville/Drucat, Ronchin,



Dieppe, Arras, Laon/Athies, Lympne, West Malling, Cambridge, Odiham, Gatwick, Weston Zoyland, Leconfield, Detling, Warmwell, Barton Bendish, Twinwood Farm, Upwood, Snailwell, Honington, Manston and Madley

'B' Flight of 26 Squadron at rest at Ronaldsway during the summer of 1939 during a brief detachment from Catterick.

28 Sqn *Quicquid agas age (Whatsoever you may do, do)*
A/c Mk II Sep 41 to Dec 42
Code BF

Bases Kohat, Lashio, Zayatkwini, Port Blair, Magwe, Mingaladon, Asansol, Lahore, Ranchi, Dum Dum and Jamshedpur

116 Sqn	<i>Precision in Defence</i>	
A/c	Mk III	Feb 41 to Mar 43
Code	II	
Bases	Hatfield, Hendon, Heston and Croydon	
138 Sqn	<i>For freedom</i>	
A/c	Mk IIIA	Aug 41 to Mar 42
Code	NF	
Bases	Newmarket and Stradishall	
148 Sqn	<i>Trusty</i>	
A/c	Mk IIIA	Feb 44 to May 45
Code	FS	
Bases	Brindisi and Calvi	
161 Sqn	<i>Liberate</i>	
A/c	Mk IIIA	Feb 42 to Jun 45
Code	MA	
Bases	Newmarket, Graveley, Tempsford and Tangmere	
173 Sqn	<i>Quocumque (Whithersoever)</i>	
A/c	Mk II	Jul 42 to Jul 43
Base	Heliopolis	
208 Sqn	<i>Vigilant</i>	
A/c	Mk I	Jan 39 to May 42
	Mk II	Jan 39 to May 42
Bases	Heliopolis, Mersah Matruh, Qasaba, Sidi Barrani, Bir Kanayis, Siwa, Halfaya, Bir Mella, Gambut, Tmimi, Mechili, Agedabia, Marawa, Barce, Kazaklar, Larissa, Pharsala, Amphiklia, Kalamaki, Argos, Maleme, Aboukir, Gaza, Habbaniyah, Amman, H.4, Haifa, Ramleh, Muqueibila, Rosh Pinna, Rayak, Deir-es-Zor, Aqir, LG 10, Gabr Saleh, LG 75, LG 112, LG 134, LG 123, LG 128, El Gubbi, LG 131, Antelat, Msus, Benina, Martuba, Acroma, Sidi Azeiz, Bir el Regal, El Adem and Moascar	
225 Sqn	<i>We guide the sword</i>	
A/c	Mk II	Oct 39 to Sep 40
	Mk III	Sep 40 to Jun 42
Codes	LX & WU	
Bases	Odiham, Old Sarum, Tilshead, Okehampton, Shoreham, Pembrey, Exeter, Staverton, Thruxton, Weston Zoyland, Dumfries and Abbotsinch	
231 Sqn	<i>Prepared to Attack</i>	
A/c	Mk II	Jul 40 to Aug 41
	Mk III	Nov 40 to May 43
Code	VM	
Bases	Aldergrove, Newtownards, Long Kesh, Maghaberry, Nutts Corner, Ballyhalbert and Clifton	
237 (Rhodesia) Sqn	<i>Primum agmen in caelo (The vanguard is in the sky)</i>	
A/c	Mk I	Nov 40 to Nov 41
	Mk II	Nov 40 to Nov 41
Bases	Gordons Tree, Blackdown, Agordat, Barentu, Agordat, Umrtsar, Asmara, Waidi Halfa, Kufra, Kasfareet, 'Y' LG, LG 10 and LG75	
239 Sqn	<i>Exploramus (We seek out)</i>	
A/c	Mk II	Sep 40 to May 41
	Mk III	Apr 41 to Jan 42
Code	HB	
Bases	Hatfield, Gatwick, Cambridge, Weston Zoyland, Netheravon and Kidlington,	
241 Sqn	<i>Find and forewarn</i>	
A/c	Mk II	Sep 40 to Dec 40
	Mk III	Dec 40 to May 42
Code	RZ	
Bases	Longman, Bury St Edmunds, Bottisham, Snailwell, Macmerry, Henlow and Docking	
267 Sqn	<i>Sine mora (Without delay)</i>	
A/c	Mk I	Jan 41 to Jun 42
	Mk II	Jan 41 to Jun 42
Code	KW	
Base	Heliopolis	
268 Sqn	<i>Adjidaumo (Tail in the air)</i>	
A/c	Mk II	Sep 40 to Apr 41
	Mk III	Feb 41 to Mar 42
Code	NM	
Bases	Bury St Edmund, Cambridge, Snailwell, Ipswich, West Raynham, Barton Bendish, Penshurst, Twinwood Farm, Weston Zoyland, Docking and Ibsley	
275 Sqn	<i>Non interibunt (They shall not perish)</i>	
A/c	Mk III	Oct 41 to Sep 43
Code	PV	
Bases	Valley, Andreas and Eglinton	
276 Sqn	<i>Retrieve</i>	
A/c	Mk IIIA	Oct 41 to May 43
Code	AQ	
Bases	Harrowbeer, Roborough, Portreath, Warmwell, Perranporth and Fairwood Common	
277 Sqn	<i>Quaerendo servamus (We save by seeking)</i>	
A/c	Mk III	Dec 41 to Jun 44
Code	BA	
Bases	Stapleford Tawney, Martlesham Heath, Hawkinge, Shoreham, Gravesend, Warmwell and Hurn	
278 Sqn	<i>Ex mare ad referendum (From out of the sea to strike again)</i>	
A/c	Mk IIIA	Oct 41 to Feb 43
Code	MY	
Bases	Matlaske, North Coates, Coltishall, Woolsington, Acklington, Hutton Cranswick, Ayr, Drem, Castletown, Peterhead and Sumburgh	
285 Sqn	<i>Respite finem (Consider the end)</i>	
A/c	Mk III	Dec 41 to Jun 42
Code	VG	
Base	Wrexham	
287 Sqn	<i>C'est en forgeant (Practice makes perfect)</i>	
A/c	Mk III	Nov 41 to Apr 42
Code	KZ	
Base	Croydon, Debden, Hornchurch, Merston, Martlesham Heath, Fairlop, Biggin Hill, Northolt, Ipswich, Ford, Honiley, Hunsdon, Southend and Farnborough	
288 Sqn	<i>Honour through deeds</i>	
A/c	Mk II	Nov 41 to Mar 42
	Mk III	Nov 41 to Mar 42
Code	RP	
Bases	Digby, Church Fenton and Duxford	
289 Sqn		
A/c	Mk III	Nov 41 to Mar 42
Code	YE	
Base	Kirknewton	



Formed at Abbotsinch on October 7, 1940 the all-Polish 309 Squadron worked closely with the Polish Army which was based in Scotland during the early years of the war. Mk IIIA, V9437, is depicted which was later transferred to 2 AGS. *Andy Hay/www.flyingart.co.uk*

309 (Ziemia Czerwieska) Sqn

A/c	Mk III	Nov 40 to May 41
	Mk IIIA	May 41 to Jul 42
Code	AR & ZR	

Base Abbotsinch, Renfrew, Perth/Scone, Dunino, Gatwick, Longman and Findo Gask

357 Sqn *Mortem hostibus (We bring death to the enemy)*

A/c	Mk IIIA	Mar 45 to Nov 45
Bases	Jessore, Meiktila, Mingaladon and Don Muang	

400 (City of Toronto) Sqn *Percussuri vigiles (On watch to strike)*

A/c	Mk III	Mar 41 to Dec 41
Code	SP	

Bases Odiham, Redhill, Gatwick, Bottisham and Weston Zoyland

414 (Sarnia Imperials) Sqn *Totis Viribus (With all our might)*

A/c	Mk III	Aug 41 to Jun 42
Code	RU	

Base Croydon

510 Sqn

A/c	Mk I	Oct 42 to Jan 43
Base	Hendon	

516 Sqn

A/c	Mk II	Apr 43 to Dec 43
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Base Dundonald

598 Sqn

A/c	Mk IIIA	Dec 43 to Jan 44
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Base Peterhead, Longman, Skaeabrae, Sumburgh, Montrose and Turnhouse

613 (City of Manchester) Sqn

A/c	Mk II	<i>Semper parati (Always ready)</i> Apr 40 to Jan 41
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	Mk IIIA	Jan 41 to Sep 42
Code	ZR & SY	

Bases Odiham, Netherthorpe, Firbeck, Clifton, Sutton Bridge, Doncaster, Martlesham Heath, Doncaster, Weston Zoyland, Twinwood Farm and Ouston

614 (County of Glamorgan) Sqn *Codaf I geislo (I rise to search)*

A/c	Mk II	Jul 39 to Jul 41
	Mk III	Apr 41 to Jan 42
Code	YX & LJ	

Bases Pengam Moors, Odiham, Weston Zoyland, Grangemouth, Evanton, Montrose, Longman, Dumfries, Tangmere, Macmerrey, Westhampnett, Dalcross, Elgin, Clifton, West Raynham and Thrupton,

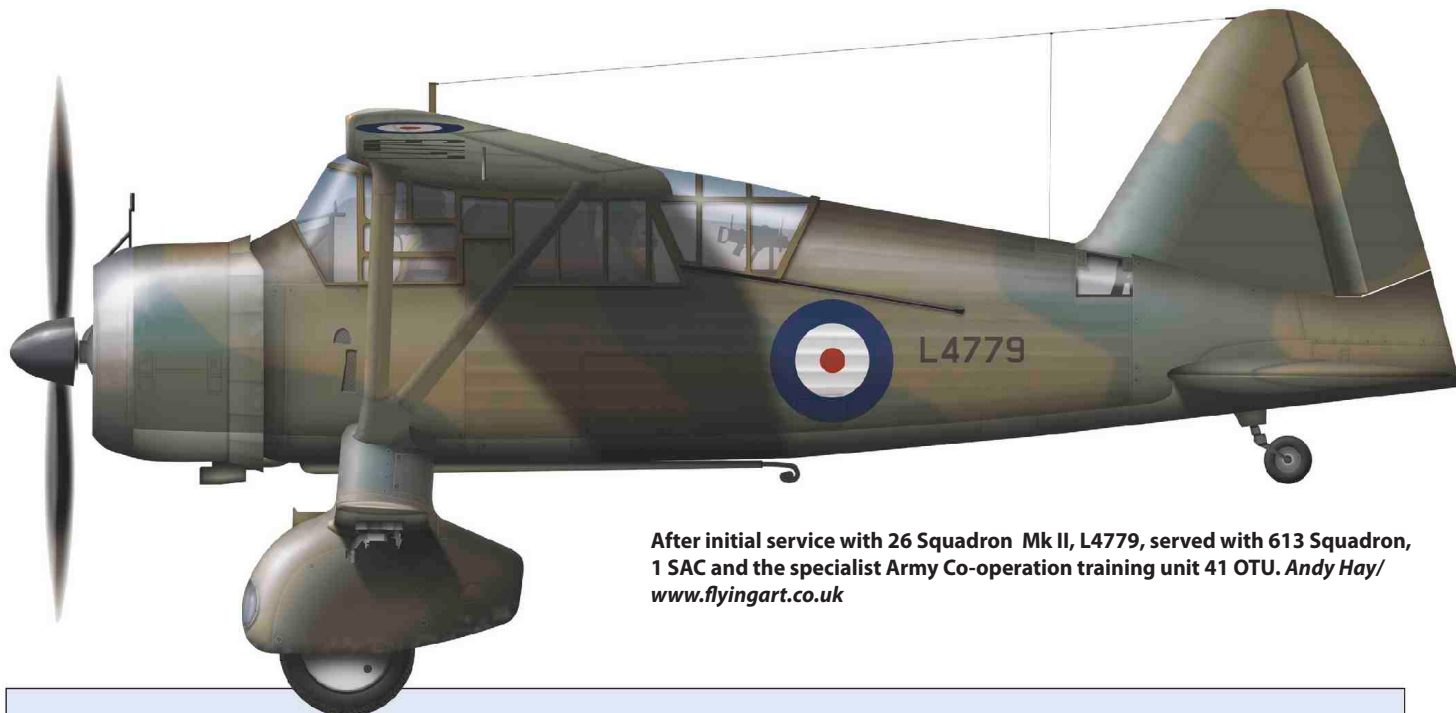
695 Sqn *We exercise their arms*

A/c	Mk I	Dec 43 to Jan 44
	Mk II	Dec 43 to Jan 44
Code	4M	

Base Bircham Newton

RAF second-line units

Aden Communication Flight; 2 (O)AFU; 3 (O)AFU (TT); 4 (O)AFU; 9 (O)AFU; 1 AAS; AFEE; 21 AD; 1 AGS; 2 AGS; 3 AGS; 4 AGS; 7 AGS; 8 AGS; 9 AGS; 10 AGS; 13 AGS; 1 AOS; 2 AOS; 4 AOS; 5 AOS; ASR Flts (UK) (10 Gp – 1, 2, 3 & 4 Flts; 11 Gp – 5, 6, 7 & 8 Flts; 12 Gp – 9 & 10 Flts); Air Transport Auxiliary (Training) Ferry Pool; 1 Anti-Aircraft Calibration Flt; 'A' Flt 1 AACU; 'B' Flt 1 AACU; 'D' Flt 1 AACU; 'F' Flt 1 AACU; 'H'; Flt 1 AACU; 'M' Flt 1 AACU; 'O' Flt 1 AACU; 'P' Flt 1 AACU; 6 AACU; 7 AACU; 8 AACU; 22 AACU; 1 AACU (IAF); 3 AACU (IAF); 1 Anti-Aircraft Practice Camp, Locking; 2 AAPC, Langham; 3 AAPC, Felixstowe (Ipswich); 4 AAPC, Towyn; 6 AAPC, Acklington; 8 AAPC, Montrose; 1, 2, 3, 4, 11, 16 & 17 APC; 3 Armament Training Camp; Army Co-operation Command Communication Flt; Army Co-operation Pool; (No.1) School of Army Co-operation; No.2 School of Army Co-operation; Bengal Communication Flt; 7 B&GS; 31 B&GS, Canada; Central Gunnery School; Central Landing Establishment; Central Navigation School; 3 Civil Maintenance Unit; 1 Combat Training Wing; 1333 & 1653 CU; 1414 Flt; 416 (Army Co-operation) Flt; 419 (Special Duties) Flt; 1416 (Reconnaissance) Flt; 1419 (Special Duties) Flt; 1424 (Air



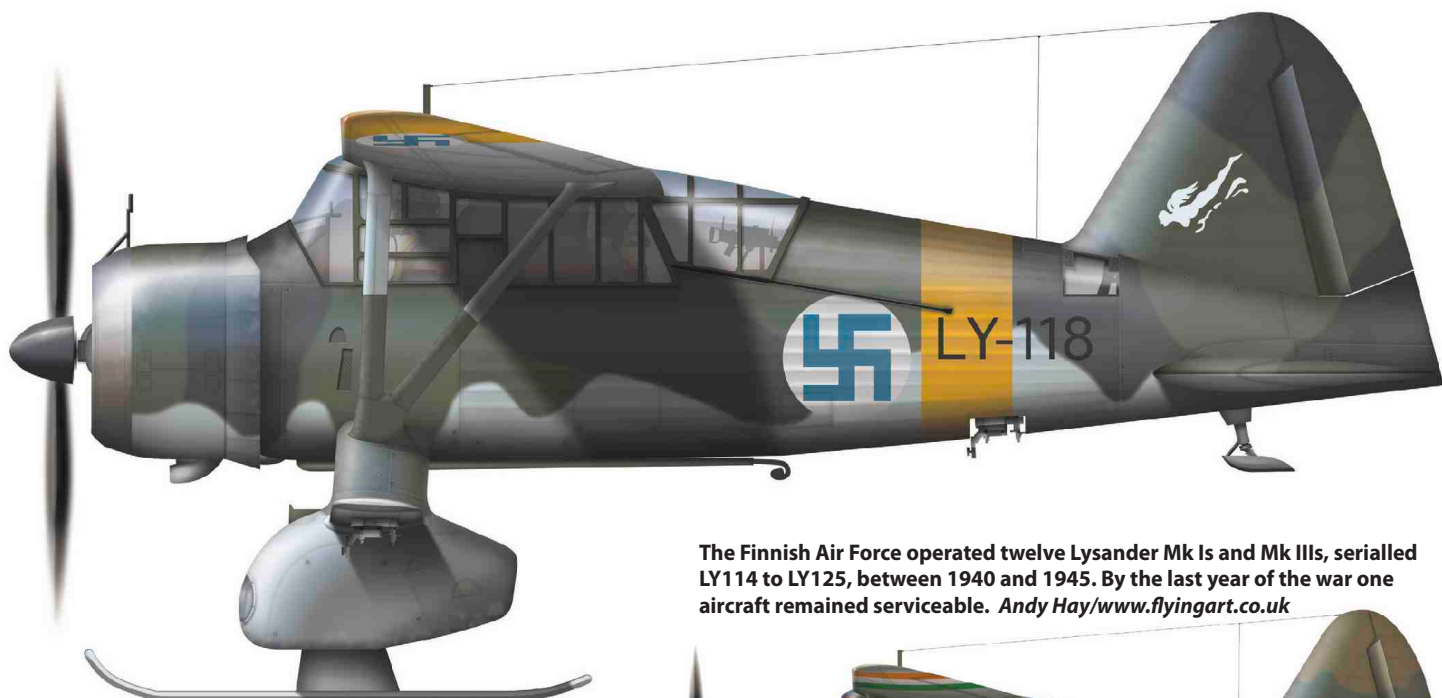
After initial service with 26 Squadron Mk II, L4779, served with 613 Squadron, 1 SAC and the specialist Army Co-operation training unit 41 OTU. *Andy Hay/ www.flyingart.co.uk*

Observation Post) Flt; 1433 Flt; 1441 (Combined Operations Development) Flt; 1447 Flt; 1480 (Anti-Aircraft Co-operation) Flt; 1481, 1482, 1483, 1484, 1485, 1486, 1487, 1488, 1489, 1490, 1491, 1492, 1493, 1494, 1495, 1496, 1497, 1498 & 1500 (Target Towing) Flt; 4 & 1504 BATF (Beam Approach Training Flight); 1568 Meteorological Flt; 1601, 1625, 1626, 1627, 1628, 1630, 1631, 1632, 1633 & 1634 Anti-Aircraft Co-operation) Flt; Flying Training Command Communication Flt; 10 Flying Training School; 31 Service Flying Training School, Canada; Detachement Du Cameroun (D.A.C.); Detachement Du Moyen Congo Et Du Gabon; Detachement Permanent Des Forces Aeriennesdu Tchad (D.A.T.); 3 School of General Reconnaissance; 5 Glider Training School; 1 Ground Defence Gunners School; 9 Gp Anti-Aircraft Co-operation Flt; 10 Gp AACF; 11 Gp AACF; 12 Gp AACF; 13 Gp AACF; 1 Gp Communication Flight; 2 Gp CF; 3 Gp CF; 4 Gp CF; 5 Gp CF; 8 Gp CF; 9 Gp CF; 14 Gp CF; 15 Gp CF; 16 Gp CF; 18 Gp CF; 19 Gp CF; 82 Gp CF; 201 Gp CF; 204 Gp CF; 221 Gp CF; 1 Gp Target Towing Flt; 2 Gp TTF; 3 Gp TTF; 4 Gp TTF; 5 Gp TTF; 6 Gp TTF; 9 Gp TTF; 10 Gp TTF; 11 Gp TTF; 12 Gp TTF; 13 Gp TTF; 14 Gp TTF; 82 Gp TTF; 5 Gp Training Flt; Air Headquarters India Communication Unit; Communication Flt, Khartoum;

Air HQ Levant Communication Flt; Communication Flt, Lydda; The Lysander Flt; 1 (Coastal) Operational Training Unit; 2 (Coastal)OTU; 3 (Coastal)OTU; 4 (Coastal)OTU; 5, 6 & 7 OTU; 8 (Coastal)OTU; 9 (Coastal)OTU; 10, 11, 12, 13, 14, 15, 16, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 34, 36, 41, 42, 43, 51, 53, 54, 55, 56, 58, 59, 60 & 61 OTU; 70 (Middle East) OTU; 71, 74 & 81 OTU; 102 (Glider)OTU; 132 (Coastal)OTU; 151 (Fighter)OTU; 1 OTU (India); 1 RAF Regiment School; 3 RAF Regiment School; Special Duty Flt; Station Flights – Aldergrove, Andover, Asansol, Beaulieu, Boscombe Down, Bottisham, Catfoss, Catterick, Coltishall, Coningsby, Driffild, Dundonald, Eastchurch, Fairwood Common, Gibraltar, Goxhill, Hawkinge, Hutton Cranswick, Inverness, Kaldadames, Kenley, Lydda, Manston, Mildenhall, Netheravon, Newmarket, Northolt, Odiham, Old Sarum, Pembrey, Perranporth, Portreath, Reykjavik, Ringway, Roborough, Salmsbury, Talbenny, Tangmere, Warmwell, Weston Zoyland, West Raynham, White Waltham and Wyton; 1 Torpedo Training Unit; 2 TTU; Transport & Communication Flt; West Africa Communication Sqn; Communication Flt, Air Headquarters Western Desert/Communication Unit, Western Desert; 239 Wing and 'D' Flt.



Lysander Mk IIIA, V9618, of 754 Squadron stationed at Arbroath (HMS Condor). The unit's main task was to train observers and air gunners to use ASV between 1941 and March 1944. *Andy Hay/ www.flyingart.co.uk*



The Finnish Air Force operated twelve Lysander Mk Is and Mk IIIs, serialised LY114 to LY125, between 1940 and 1945. By the last year of the war one aircraft remained serviceable. *Andy Hay/www.flyingart.co.uk*



The Irish Air Corps operated six Lysander Mk IIs between 1939 and 1947 serialised 61 to 66. 61 and 66 were converted to target tugs while 63 soldiered on until April 1947, the remainder having been written off during 1941 and 1942. *Andy Hay/www.flyingart.co.uk*

Portuguese Air Force

BA3 & 361 Grup de Reconhecimento e Informacao
A/c Mk IIIA



The Turkish Air Force (Türk Hava Kuvvetleri) ordered 36 Lysander Mk IIs in 1939, all of them being delivered in February and March 1940 by sea. *Andy Hay/www.flyingart.co.uk*

Turkish Air Force

A/c Mk II
Base Yesilkoy

United States Army Air Force

330th BS, 457th BS; 340th BS; 496th FTG; 2025th GF & 2031st GF
A/c Mk IIIA & Mk IIIA TT

*RCAF, IAF and REAF service covered in separate chapters

Fleet Air Arm

754 Sqn

A/c Mk IIIA
Code W5 Jun 41 to Mar 44

Base Arbroath

755 Sqn

A/c TT Mk III
Code TT Mk IIIA
W6 Jul 41 to Oct 44

Base Worthy Down

757 Sqn

A/c Mk III
Code X6 Apr 42 to Dec 42

Base Worthy Down

Foreign Air Force service

Royal Australian Air Force

3 Sqn
Operta Aperta (Secrets Revealed)

A/c Mk II Aug 40 to Jan 41

451 Sqn
A/c Into the midst from above
Code Mk I & II
BQ 41 to 42

Bases Kasfareet, Aboukir, Qasaba, LG 75, LG 132, LG 128, LG 145, LG 146, El Gubbi, LG 131, LG 148, Sid Azeiz, Heliopolis, Rayak and Estabel

Burma Volunteer Air Force

A/c Mk II Mar 42 to Dec 42

Bases Mingaladon, Kyaikto, Syriam, Megui, Pokpyin and Lekokon

Finnish Air Force

12 Sqn (LLv.12), 14 Sqn (LLv.14), 16 Sqn (LLv.16) & 21 Sqn (HleLv.21)

A/c All Mk II

Base Hirvas (12 Sqn), Solomanni (16 Sqn)

Free French Air Force (Forces Aériennes Françaises Libres)

'Bretagne' Groupe, 'Artois' Group & the Free French Flying School
A/c Mk II

Irish Air Corps

1st Fighter Sqn

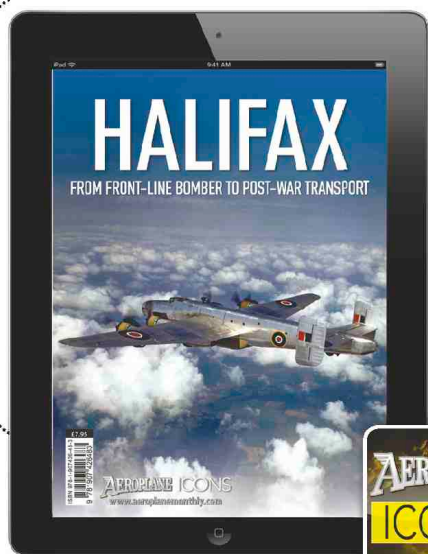
A/c Mk II
Code 61-66
Base Baldonnel Jul 39 to Apr 47

The Lysander was one of three British-designed aircraft which formed the foundations of the modern RCAF; the other two being the Blenheim (Bolingbroke) and the Hurricane. Note the 'Serviceable' label on the inside of the cockpit canopy is for the benefit of the pilot and not the viewer. *Via Martyn Chorlton*



AEROPLANE

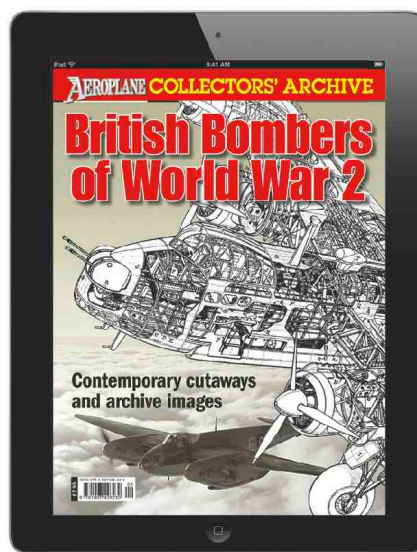
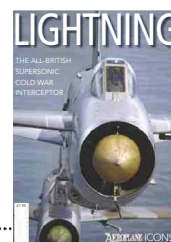
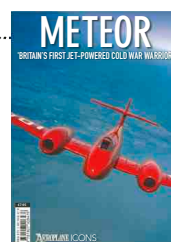
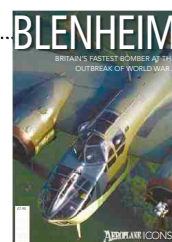
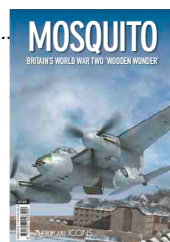
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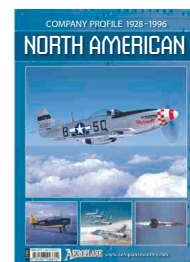
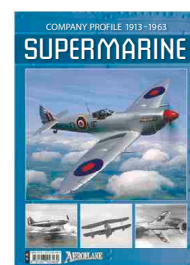
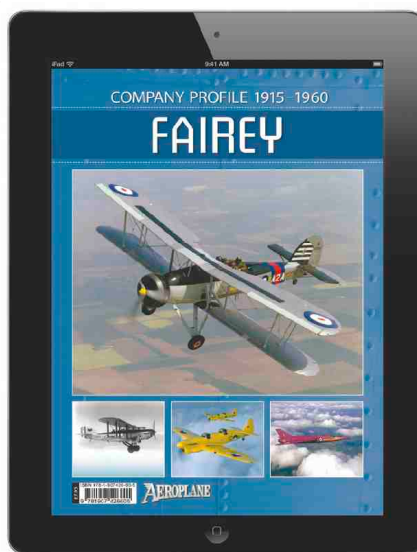
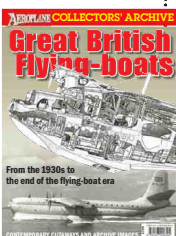
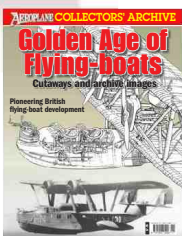
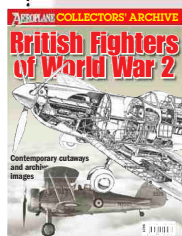
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The cockpit of the Shuttleworth Collection's Lysander with kind permission of Tony Podmore.
Martyn Chorton

